ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

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NATURE AND EXTENT OF SOIL CONTAMINATION SUMMARY REPORT

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE
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ACRONYMS AND ABBREVIATIONS

AOI	analyte of interest
AL	Action Level
BSCP	Background Soils Characterization Program
BZ	Buffer Zone
BZSAP	Buffer Zone Sampling and Analysis Plan
CAS	Chemical Abstract Service
CD ROM	Compact Disc- Read Only Memory
CDPHE	Colorado Department of Public Health and Environment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESC	Citizen's Environmental Sampling Committee
CHWA	Colorado Hazardous Waste Act
COC	Contaminant of Concern
CRA	Comprehensive Risk Assessment
CRDL	contract required detection limit
DOE	U.S. Department of Energy
DQO	data quality objective
EPA	U.S. Environmental Protection Agency
EU	Exposure Unit
ft	foot
GC	gas chromatography
GRRASP	General Radiochemistry and Routine Analytical Services Protocol
g/cm^3	grams per cubic centimeter
HEPA	high efficiency particulate air
HI	hazard index
HQ	hazard quotient
HRR	Historical Release Report
IA	Industrial Area
IAG	Interagency Agreement
IASAP	Industrial Area Sampling and Analysis Plan
IDL	instrument detection limit
IHSS	Individual Hazardous Substance Site
K-H	Kaiser-Hill Company, L.L.C.
µg/kg	micrograms per kilogram
M+2SD	mean plus two standard deviations
MDA	Minimal Detectable Activity
MDC	maximum detected concentration
MS	matrix spike
MSA	Method of Standard Additions
mg/kg	milligrams per kilogram
n	sample size
N/A	not available
NC	not calculated

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ACRONYMS AND ABBREVIATIONS

NLR	no longer representative
OU	Operable Unit
PAC	Potential Area of Concern
PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCOC	potential contaminant of concern
pCi/g	picocuries per gram
PDSR	Predemolition Survey Report
PRG	preliminary remediation goal
PU&D	Property Utilization and Disposal
QC	quality control
RCRA	Resource Conservation and Recovery Act
RFCA	Rocky Flats Cleanup Agreement
RFETS or site	Rocky Flats Environmental Technology Site
RFI/RI	RCRA Facility Investigation/Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
RLCR	Reconnaissance-Level Characterization Report
SAP	Sampling and Analysis Plan
SEP	Solar Evaporation Ponds
SQL	sample quantitation limit
SR	Summary Report
SVOC	semivolatile organic compound
SWD	Soil Water Database
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
U	nondetected
UBC	Under Building Contamination
VOC	volatile organic compound
WRW	wildlife refuge worker

1.0 INTRODUCTION

This Nature and Extent of Soil Contamination Summary Report (SR) has been prepared pursuant to Task 12 of the Final Work Plan for the Development of the Remedial Investigation/Feasibility Study (RI/FS) Report (DOE 2002a). This SR will be incorporated into the RI/FS Report as Section 3.0.

The purpose of this SR is to define the nature and the horizontal and vertical extent of analytes of interest (AOIs) present in soil, for all areas within the Rocky Flats Environmental Technology Site (RFETS or site) boundary after completion of Rocky Flats Cleanup Agreement (RFCA) accelerated actions. AOIs are those analytes[1] with concentrations greater than the wildlife refuge worker (WRW) preliminary remediation goals (PRGs)[2]. The WRW PRGs[3] for soil contaminants are calculated in accordance with the Comprehensive Risk Assessment (CRA) Workplan and Methodology (CRA Methodology) (DOE 2004a) and are contained in Appendix A of the CRA Methodology. Soil concentrations greater than WRW PRGs do not trigger the need for a response action or define unacceptable levels of contaminants in the soil. Concentrations above these levels may indicate possible contamination for which a remedy evaluation is necessary. This comparison illustrates the residual concentration of contaminants that exist across the site. Soil AOIs will be carried forward and evaluated in Section 7.0, Fate and Transport, of the RI/FS Report.

Data used in this SR are the result of previous investigations conducted at the site prior to RFCA, from samples to determine whether accelerated actions were required or to confirm that accelerated actions were complete. Data collected during the sitewide RI/FS effort to support the CRA are also included in this SR. Soil data for RFETS were collected in accordance with agency-approved Sampling and Analysis Plans (SAPs)[4] and standardized contract-required analytical procedures. Approved Work Plans and SAPs specified the use of U.S. Environmental Protection Agency (EPA)-approved sampling procedures and analytical methods, data quality requirements, and data management processes, and specified the appropriate data quality objectives (DQOs)[5]. The soil nature and extent are based on data collected from June 28, 1991,[6] through April 30, 2005. This SR also discusses historical documented sources of soil contamination to provide a historical perspective of soil characterization at the site.

Surface soil measurements are for soil within the top 6 inches at the time of sampling, and subsurface soil measurements are for soil deeper than 6 inches from the surface at the time of sampling. Subsurface measurements are further sorted by the following depth intervals: 6 inches to 3 feet, 3 to 8 feet, 8 to 12 feet, and greater than 12 feet. These depths are used in relation to the following considerations:

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[1] For purposes of this SR, the concentration of contaminants is the total concentration and not the Toxicity Characteristic Leaching Procedure (TCLP) concentration.
[2] For arsenic, cesium-134, cesium-137, and radium-228 the background value is greater than the WRW PRG.
[3] The WRW PRGs were developed using a hazard quotient (HQ) of 0.1 or risk of $1x10^{-6}$. The more conservative of the two values were used for the PRG. Comparison to human health risk screening levels based on $1x10^{-6}$ risk is consistent with the Colorado Department of Public Health and Environment (CDPHE) guidance on Resource Conservation and Recovery Act (RCRA) corrective action.
[4] Pursuant to the 1991 Interagency Agreement (IAG), RCRA Facility Investigation/Remedial Investigation (RFI/RI) Work Plans and SAPs were prepared for 16 Operable Units (OUs) that existed at that time (1991-1996). Between 1996 and 2000, SAPs were prepared for Individual Hazardous Substance Sites (IHSSs) or groups of IHSSs in close geographic proximity. In 2000, two SAPs were developed: the Industrial Area (IA) SAP (IASAP) (DOE 2000a), and the Buffer Zone (BZ) SAP (BZSAP) (DOE 2002b). In 2004, the IA and BZ SAPs were combined into one SAP called the "IABZSAP" (DOE 2004b), which was approved by EPA and CDPHE on August 24, 2004.
[5] For historical investigations, specific information is available in OU- and IHSS- specific Work Plans and SAPs. For accelerated actions, specific information is available in the IABZSAP. Recent sampling investigations were conducted in accordance with the CRA Methodology (DOE 2004a).
[6] This date correlates to approved Work Plans and SAPs developed pursuant to the 1991 IAG.

- Top 6 inches – Contamination is accessible to surface users by direct contact or suspension from WRW surface use activities or wind or precipitation erosion.

- Six inches to 3 feet – Contamination may be accessible by localized disturbance of small areas related to WRW surface uses, such as post-hole digging or vegetation management, and by burrowing receptors (that is, prairie dogs).

- Three to 8 feet – Contamination may be accessible by localized disturbance of small areas by burrowing receptors (including the top 6 inches to 3 feet).

- Eight to 12 feet – This is below the average depth of excavation by burrowing receptors.[7]

- Greater than 12 feet – Contamination measurements at depth intervals below 12 feet are presented to further show the vertical gradation of soil contamination levels.

2.0 HISTORICAL DOCUMENTED SOURCES OF SOIL CONTAMINATION

Soil contamination originates from the industrial uses of hazardous substances, waste management practices, and accidental events at RFETS. Knowledge about the nature and extent of surface and subsurface soil contamination is based on documented historical information about the sources and location of hazardous substances released to the environment and on measurement of contamination levels in soil.

The U.S. Department of Energy (DOE) began more than 20 years ago to develop the extensive body of documentation about the use of hazardous substances and the known or suspected release of hazardous substances at RFETS. Information was gathered from an extensive review of Rocky Flats operating records and contemporaneous documents. In addition, interviews were conducted of persons with knowledge of Rocky Flats operations and of events that did or were suspected of releasing hazardous substances. The information collected is organized in the Rocky Flats Historical Release Report (HRR), originally published in 1992, which has been periodically updated as investigation and cleanup of the site progressed (DOE 1992).

The original HRR organized these known or suspected sources of contamination as Individual Hazardous Substance Sites (IHSSs), Potential Areas of Concern (PACs), and Under Building Contamination (UBC) sites (herein collectively referred to as IHSSs). Over the course of cleanup under the 1991 Interagency Agreement (IAG) and the 1996 RFCA, DOE has thoroughly investigated and characterized the soil contamination associated with these IHSSs to disposition them through appropriate remedial actions or by determining that no action is required pursuant to the applicable IAG and/or RFCA requirements.

Site buildings are also dispositioned by removal in accordance with RFCA requirements, regardless of whether a particular building is associated with one or more IHSSs. The building disposition process includes reconnaissance-level characterization, which includes evaluation of historical information and/or sampling and analysis requirements, to determine whether hazardous substances may be present in a building (K-H 2001). If hazardous substances are present at levels that require building removal with a RFCA decision document, the disposition process included additional

[7] While excavation is unlikely, this depth is generally accepted as within the range of excavation depths for a building basement and is consistent with CDPHE's risk assessment guidance for RCRA corrective action (CDPHE 1994).

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appropriate characterization and monitoring activities during the removal. Section 1.0 of the RI/FS Report, Site Background summarizes these investigations and remedial action activities to disposition all buildings.

Nearly all IHSSs and buildings were located in the Industrial Area (IA) Operable Unit (OU) (see Site Background, in Section 1 of the RI/FS Report for a description of site OUs) (Figure 1). The notable exceptions were IHSSs resulting from waste management practices in the BZ OU adjacent to the IA where wastes containing hazardous substances were buried (for example, the Present Landfill, see Figure 1). Of the few buildings located outside the IA OU, such as site entrance security guard posts, none were used in manufacturing or processing activities.

Sampling and analysis of surface and subsurface soil were extensively used to locate and measure hazardous substance contamination at former IHSSs and to guide the conduct and completion of remediation activities for contaminated soil.

3.0 DATA SOURCE

Over 1.3 million records for soil at RFETS exist within the RFETS environmental Soil Water Database (SWD). Soil data are extracted from SWD in accordance with the RFETS procedure for data extraction and reduction (K-H 2004) and aggregated according to media sitewide (surface soil, subsurface soil, sediment, surface water, and groundwater). The data are further processed through a series of data quality filters to ensure usability that supports CRA requirements and DQOs. The data filter routine for soil is included in Appendix A, Volume 2 of the RI/FS Report. For this SR, the same data quality filters used on soil above 8 feet for purposes of the CRA were also applied to subsurface soil at depths greater than 8 feet for consistency between depth intervals.

These filtered data are then aggregated by depth (surface soil and subsurface soil) and by analyte group. All quality control (QC) data are extracted and reported separately from matrix data. All reported values including U-qualified data (nondetects), are reported in this nature and extent SR. A value of one-half the reported value was used for all U-qualified inorganic and organic data (DOE 2004a). This does not apply to radionuclides, for which all reported values were used (DOE 1991). After the data were reduced, approximately 850,000 records were used in this evaluation.

Some of the soil sampling locations no longer exist as they were at the time of sampling (for example, areas have been remediated). Samples determined to be no longer representative (NLR) have been removed from the evaluation.[8] For this SR, it is assumed that land surface contouring has not altered the surface and subsurface soil depth profile of the soil samples.

Approximately 7,200 surface soil samples (Figure 2), 10,000 subsurface soil samples at depth intervals of 0.5 to 3 feet, 3 to 8 feet and 8 to 12 feet (Figure 3), and 3,800 subsurface soil samples at depth intervals of 12 to 30 feet, 30 to 50 feet and greater than 50 feet (Figure 4), have been collected since June 28, 1991.

Various analytical suites have been used in sampling and analysis based on the knowledge of IHSSs and the consultative process with the regulatory agencies. Soil sampling and analysis have

[8] NLR samples are identified in SWD according to RFETS Environmental Data Management Procedure PRO-1058-ASD-005, Rev. 0, April 12, 2001 (currently under review).

included the following suites of analyses from EPA's Target Compound List (TCL) (organics) and Target Analyte List (TAL) (metals and cyanide), which are included in this evaluation: dioxins and furans, explosives, herbicides, metals, pesticides, polychlorinated biphenyls (PCBs) aroclors, radionuclides, semi-volatile organic compounds (SVOCs), volatile organic compounds (VOCs), and wet chemistry parameters (ammonia, anions [fluoride, nitrate, and nitrite], and cyanide).

The data sets used for identification of the AOIs in this SR are contained on a companion Compact Disc-Read Only Memory (CD ROM) (Nature and Extent Soils data set) included with this document.

3.1 Data Adequacy and Data Quality

Soil data adequacy and data quality of the final data set are evaluated in Attachments C and D, respectively, of Appendix A, Volume 2 of the RI/FS Report (K-H 2005). Data used to evaluate the soil nature and extent met data adequacy and data quality criteria for the CRA. Through RFCA accelerated actions, all sources of contamination have been well characterized in accordance with EPA- and the Colorado Department of Public Health and Environment (CDPHE)- approved SAPs.

For data collected at depths greater than 8 feet, data quality has been assessed on individual OUs[9] and IHSS group data sets prior to generating the individual decision documents. Soil data for RFETS were collected under agency-approved SAPs and standardized contract-required analytical procedures. Work Plans and SAPs specified the use of EPA-approved sampling procedures and analytical methods, data quality requirements including DQOs, data adequacy requirements, and data management processes.

4.0 IDENTIFICATION OF SOIL AOIs

Soil AOIs were identified using the screening approach presented on Figure 5. This approach is described in the following sections. ("Screening" refers to the process of identifying and defining areas, contaminants, and conditions at the site.) Knowledge of processes at the site is used in a weight-of-evidence approach for those analytes detected above background levels. AOIs were selected for both surface soil and subsurface soil.

4.1 AOI Screening Step 1 - Background Comparison

The background comparison is used to distinguish between contamination associated with RFETS activities and naturally occurring or other non-RFETS-related background conditions for inorganics and radionuclides. The background data for the site were originally collected under two programs and the data are summarized in two separate reports. Surface soil background data are summarized in the Geochemical Characterization of Background Surface Soils: Background Soils Characterization Program (BSCP), Final Report (DOE 1995). Subsurface soil background data are summarized in the Background Geochemical Characterization Report (DOE 1993). Background data summary statistics including mean, standard deviation and mean plus two standard deviations were calculated in the data description and evaluation portion of the CRA (DOE 2005). These background data summary tables are also presented, as Tables 1 and 2 of this SR.

The background mean plus two standard deviations is used for comparison. This is the same

[9] Characterization data associated with individual OUs were included in data summary reports (DOE 2000b and DOE 2001).

background comparison used in evaluating the need for accelerated actions because this evaluation focuses on performing a point-by-point comparison of the data, where each point is compared to an upper-bound background value. The CRA uses the same background data set; however, it uses the upper confidence level statistic rather than the standard deviation for background screening and compares the sample populations within a specific Exposure Unit (EU) to the background data sets, which results in a conservative, calculated risk.

Soil background data are not available for organics; therefore no background comparison is performed.

In AOI Screening Step 1, an analyte is eliminated as a potential AOI when all sample results within a specified depth interval are less than the background mean plus two standard deviations. Analytes that have sample results within a specified depth interval greater than the background concentration are carried forward to AOI Screening Step 2. For analytes that do not have a background concentration (for example, organic constituents) and are detected above the detection limit, this screening step is not applicable and the analyte proceeds to AOI Screening Step 2.

4.2 AOI Screening Step 2 – PRG Comparison

Surface and subsurface soil PRGs were calculated based on different exposure scenarios. For example, subsurface soil PRGs were calculated based on limited exposure of workers to contact subsurface soil at a maximum depth of 8 feet[10] during certain activities (Appendix A to the CRA Methodology [DOE 2004a]).

AOIs identified in screening step 1 are compared against the WRW PRGs. For each analyte where all sample results are below the WRW PRG for surface or subsurface soil as applicable, the analyte is eliminated as an AOI. For analytes that have one or more sample results above the WRW PRG, the analyte is carried forward to AOI Screening Step 3[11]. In addition, analytes with concentrations greater than the WRW PRGs are also compared against 10 times the WRW PRG as a means to further delineate residual levels of contamination. Ten times the WRW PRGs represents a risk of $1x10^{-5}$, which is the midpoint of the acceptable risk range under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA) and Colorado Hazardous Waste Act (CHWA), or the upper limit of a hazard quotient (HQ) of 1.

AOIs identified in Screening Step 2 are plotted on a map to assess the location and aerial extent. Each map plots the maximum detected concentration (MDC) and the minimum nondetect value within a specified depth interval. The maps for each analyte that passed Screening Step 2 are contained on a companion CD ROM (Nature and Extent Soil Figures) included with this document.

4.3 AOI Screening Step 3 - Process Knowledge Evaluation

AOI Screening Step 3 involves the determination of whether certain metal and radionuclide analytes should be retained or eliminated as AOIs based on process knowledge or other criteria.

[10] The subsurface soil PRG was used as a means to screen data below 8 feet. If the potential existed for people to be exposed at depths greater than 8 feet, the exposure scenario might be different and the PRGs may also change based on the different scenario.
[11] For arsenic, cesium-134, cesium-137, and radium-228 the PRG values are less than the background values. Therefore, only those concentrations that are greater than both background and the PRG are carried forward to AOI screening step 3.

The process knowledge evaluation takes into account historical RFETS-related manufacturing and operations that may have resulted in release of metal and/or radionuclide analytes. Process knowledge of the historical use of metals and radionuclides at the site, or lack of use, and an understanding of the natural occurrence and distribution of these analytes in the environment, all provide useful information regarding the distribution of an analyte in the environment.

4.4 Identification of Surface Soil AOIs

Metals and radionuclides eliminated as surface soil AOIs based on Screening Step 3 and the rationale for their elimination are summarized in Table 3. (See also Figures A through F on CD ROM.) In surface soil, cobalt, iron, manganese, mercury, cesium-137, and radium-228 were eliminated as AOIs.

Twenty-two surface soil AOIs were identified and are presented in Table 4. The specific AOIs included seven metals, two PCB aroclors, six SVOCs, two VOCs and five radionuclides, as identified below. Each of these AOIs is discussed further in Section 5.0.

Surface Soil AOIs (> WRW PRG)	Surface Soil AOIs (>10X WRW PRG)
Metals	
Aluminum	
Antimony	
Arsenic	Arsenic
Cadmium	
Chromium (total)	
Uranium (total)	
Vanadium	Vanadium
PCBs	
Aroclor 1254	
Aroclor 1260	
SVOCs	
Benzo(a)anthracene	
Benzo(a)pyrene	Benzo(a)pyrene
Benzo(b)fluoranthene	
Dibenz (a,h)anthracene	
Indeno(1,2,3-cd)pyrene	
Pentachlorophenol	
VOCs	
Tetrachloroethene	
Trichloroethene	
Radionuclides	
Americium-241	Americium-241
Plutonium-239/240	Plutonium-239/240
Uranium-233/234	
Uranium-235	
Uranium-238	

For those analytes with concentrations greater than WRW PRGs, a frequency of detection above the WRW PRG is also identified in Table 4. The detection frequency refers to the percentage of total samples in which an analyte was detected above the WRW PRG. Blue highlighted rows indicate those AOIs with a frequency of detection greater than 0 percent and less than 1 percent

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above the WRW PRG. The green highlighted rows indicate those AOIs with a frequency of detection greater than or equal to 1 percent and less than 5 percent above the WRW PRG. Yellow highlighted rows indicate those AOIs with a frequency of detection greater than or equal to 5 percent above the WRW PRG.

AOIs that passed the screen but were detected only in a very small percentage of the samples collected (for example, less than 1 percent and greater than 5 percent) may reflect an isolated area of contamination rather than an area of widespread contamination. Analytes that are infrequently detected may also indicate localized variability of background analyte concentrations within soil. However, for purposes of defining the nature and extent of contamination, low-frequency-of-detection analytes with concentrations greater than WRW PRGs were retained as AOIs.

4.5 Identification of Subsurface Soil AOIs

Radium-228 was eliminated as a subsurface soil AOI based on Screening Step 3. The rationale for eliminating radium-228 is the same as that identified in Table 3 for surface soil. (See also Figures G and H on CD ROM.)

Results of the AOI screening process for subsurface soil are presented in Tables 5 through 10. Subsurface soil data are presented in the following depth increments: 0.5'- 3', 3'- 8', 8'- 12', 12'- 30', 30'- 50', and >50' (with a maximum sample depth of 209 feet). The data were aggregated by these depths and by analyte.

Based upon this screening process, 20 subsurface soil AOIs (to a depth of 30 feet) were identified (which vary over depth): 3 metals, 3 PCB aroclors, 4 SVOCs, 6 VOCs, and 4 radionuclides; and are identified below.

Subsurface Soil AOIs (≥ WRW PRG)	Subsurface Soil AOIs (≥10 X WRW PRG)
Metals	
Arsenic	
Chromium (total)	Chromium (total)
Lead	
PCBs	
Aroclor 1016	
Aroclor 1254	Aroclor 1254
Aroclor 1260	
SVOCs	
Benzo (a) anthracene	
Benzo (a) pyrene	
Benzo (b) fluoranthene	
Dibenz (a,h) anthracene	
VOCs	
1,1,2,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane
Carbon Tetrachloride	Carbon Tetrachloride
Chloroform	Chloroform
Methylene Chloride	
Tetrachloroethene	Tetrachloroethene
Trichloroethene	Trichloroethene
Radionuclides	
Americium-241	Americium-241

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Subsurface Soil AOIs (≥ WRW PRG)	Subsurface Soil AOIs (≥10 X WRW PRG)
Plutonium-239/240	Plutonium-239/240
Uranium-235	
Uranium-238	

The surface and subsurface soil AOIs for each depth interval are summarized in Table 12 for those analytes with concentrations greater than the WRW PRGs and Table 13 for those analytes greater than ten times the WRW PRGs. Each of these AOIs is discussed further in Section 5.0. A frequency of detection above the WRW PRGs has also been identified in Tables 4 through 10, 12, and 13 for each AOI using a color-coding system. The color-coding for these tables is the same as discussed in Section 4.4 for surface soil AOIs.

5.0 NATURE AND EXTENT OF SOIL CONTAMINATION

This section summarizes the nature and extent of screened AOIs present in surface and subsurface soil and as highlighted in Tables 4 through 10. For each of the 22 AOIs in surface soil and the 20 AOIs in subsurface soil, maps were created and are presented on Figures 6 through 45. The purpose of these figures is to show the sampling locations and relative concentration of AOIs as a means to depict areal extent. For each figure, the results are separated into five categories, as follows, to provide information relevant to human health screening levels:

- Locations where the constituent was not detected (gray);
- Locations where the constituent concentration is greater than the detection limit and less than or equal to background for radionuclides and metals (tan);
- Locations where the constituent concentration is greater than the detection limit (or background) and less than the WRW PRG (green);
- Locations where the constituent concentration is greater than or equal to the WRW PRG but less than 10 times the WRW PRG (yellow); and
- Locations where the constituent concentration is greater than or equal to 10 times the WRW PRG (red).

For subsurface soil figures, additional symbols (squares and triangles) have been provided to represent the various depth intervals for each analyte.

5.1 Nature of Soil Contamination

Figure 1 is an RFETS site map with the boundaries of two OUs defined: the IA and the BZ. The IA OU identifies the area of the site with the highest likelihood of contamination to be present based on past industrial type activities. Figure 1 also shows the locations of the following notable subsurface areas containing buried materials remaining in the OUs.

- Present Landfill – Disposed wastes being contained in place and closure cover installed. See the Historical Release Reports regarding IHSS 114 (HRR) (DOE 1992).

- Original Landfill – Disposed waste being contained in place and closure cover installed. See the Historical Release Reports regarding IHSS 115 (HRR) (DOE 1992).

No other areas in the BZ OU had activities that indicated any waste management or industrial activities that would potentially affect subsurface soil. Thus, any contamination from the IA and nearby BZ sources would be evident in surface soil samples (with the exception of VOCs that would volatilize in surface soil). Soil contamination was subject to migration processes, such as surface erosion by wind and precipitation. Precipitation and groundwater interactions also caused migration. Site-specific factors influencing migration of soil contamination, such as the chemical and physical form of contamination and hydrogeology, have been extensively studied and will be discussed in Section 7.0, Fate and Transport, of the RI/FS Report.

5.2 Extent of Surface Soil Contamination

Approximately 7,200 surface soil locations (Figure 2) have been sampled and analyzed. Surface soil samples typically consist of three components: randomly chosen locations, targeted locations and borehole locations. The samples may have been composited from several areas surrounding the designated location, or they may have been discrete samples collected from a single point.

Each of the 22 surface soil AOIs are mapped on Figures 6 through 24 and are discussed by analyte group below. PCB aroclors and uranium isotopes are each combined onto one figure.

5.2.1 Metals

Metal AOIs identified in surface soil are aluminum, antimony, arsenic, cadmium, chromium (total), uranium (total), and vanadium (Figures 6 through 12).

Aluminum

Figure 6 shows the extent of aluminum in surface soil. Some aluminum concentrations are greater than background (17.2 percent). Some aluminum concentrations in surface soil are greater than the WRW PRG (3.98 percent), but less than 10 times the WRW PRG. Surface soil concentrations of aluminum greater than the WRW PRG are found primarily within the IA OU (around the 400 Area and 700 Area), with a few locations scattered throughout the BZ OU. The majority of the aluminum results in the BZ OU are below background.

Aluminum was used in metallurgical operations within Buildings 444, 779, 865, and 883 (K-H 2005). Aluminum parts were disassembled and recycled or prepared for disposal in Building 707, and aluminum nitrate was used in an aqueous dissolution process within Building 771. There are no records of spills associated with aluminum within any of these buildings, and aluminum was not identified above a RFCA action level (AL) requiring an accelerated action based on SAPs, SAP Addenda, or Closeout Reports for IHSSs.

Antimony

Figure 7 shows the extent of antimony in surface soil. Some antimony concentrations are greater than background (12.9 percent). Some antimony concentrations in surface soil are greater than the WRW PRG (0.08 percent or 2 out of 2,494 locations), but less than 10 times the WRW PRG. The two surface soil concentrations of antimony greater than the WRW PRG are found at each landfill.

The majority of the antimony results are nondetect in the BZ OU, with the remaining locations below background.

Based on the ChemRisk reports, antimony was used in very small quantities at the site and appeared to have been used as laboratory standards or analytical testing materials (K-H 2005). Antimony was not carried forward in the ChemRisk process indicating an insufficient quantity existed at RFETS to pose a potential off-site health hazard. Antimony was not identified above a RFCA AL requiring an accelerated action based on SAPs, SAP Addenda or Closeout Reports for IHSSs. Concentrations of antimony detected beneath UBC 559 indicate levels within the same order of magnitude as background.

Arsenic

Figure 8 shows the extent of arsenic in surface soil. Some arsenic concentrations are greater than background (2.7 percent)[12]. Some arsenic concentrations in soil are greater than the WRW PRG (2.7 percent)[13] and 10 times the WRW PRG (0.19 percent). Arsenic concentrations are located primarily within the IA OU, with a few locations around the Present Landfill pond. Arsenic was detected in all locations within the BZ OU, with the majority of the arsenic results below background.

Based on the ChemRisk reports, arsenic was used in very small quantities at the site and was used as laboratory standards in Buildings 444, 559, 779, and 881. Arsenic was not carried forward in the ChemRisk process based on the limited use of arsenic compounds, and because their annual usage rates exceeded inventory quantities and their release to the environment was estimated to be minimal or there would be no release. Based on a review of Reconnaissance Level Characterization Reports (RLCRs) and Predemolition Survey Reports (PDSRs) for these buildings, there is no record of spills involving arsenic within these buildings. Arsenic was identified above a RFCA AL requiring an accelerated action based on SAPs, SAP Addenda, or Closeout Reports for IHSSs. Specifically, arsenic was detected at the Building 712/713 cooling towers in which arsenic may have been a component of the rust inhibitors used in the cooling towers; at the East Firing Range as a component of lead shot; and at the downspouts to Building 707, which may have been associated with rat poison used on the roof or the presence of treated lumber also located on the roof.

Cadmium

Figure 9 shows the extent of cadmium in surface soil. Some cadmium concentrations are greater than background (4.9 percent). Some cadmium concentrations in surface soil are greater than the WRW PRG (0.04 percent or 1 out of 2,618 locations), but less than 10 times the WRW PRG. The concentration of cadmium in soil greater than the WRW PRG is within the IA OU, in the area of the former Solar Evaporation Ponds (SEP). Cadmium results in surface soil within the BZ OU are all less than background, with the majority within the IA OU also below background.

Cadmium was used in pit construction (Building 707), rolled and formed in Buildings 444, 883, and 865, used as a plating material for plutonium and uranium components (Buildings 776/777 and 881), alloyed with other metals (Building 444). In addition, cadmium salts were used as neutron absorbers (Buildings 771 and 881), and cadmium was used for thermal neutron shielding (K-H

[12] For arsenic, the surface soil background mean + 2SD is greater than the WRW PRG.
[13] Only those surface soil results greater than background and the WRW PRG are included in the percent greater than the WRW PRG value.

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2005). Spills involving process waste (containing cadmium, chromium, and lead) occurred within Buildings 371, 374, and 559. Cadmium was identified in soil at the SEP (DOE 2003).

Chromium (total)

Figure 10 shows the extent of chromium (total) in surface soil. Some chromium (total) concentrations are greater than background (25.7 percent). Some chromium (total) concentrations in surface soil are greater than the WRW PRG (5.6 percent), but less than 10 times the WRW PRG. Chromium (total) concentrations were compared to the more conservative chromium (VI) PRG versus chromium (III), because chromium (VI) is more indicative of material used in on-site processes. However, the chromium (VI) sample results available (collected in areas where process contaminants were expected) were all below the WRW PRG for chromium (VI). Chromium concentrations in soil are strongly related to the parent-rock source. Chromium is essentially immobilized as the reduced cation chromium (III) in most rocks and minerals. Chromium is present almost exclusively as chromium (III) adsorbed to organic matter and iron oxyhydroxide, precipitated as chromium hydroxide, or as a mineral (chromium clay and micas). In soil, organic matter and ferrous iron act as electron donors and readily reduce chromium (VI) to chromium (III) with chromium being sorbed to organic matter and iron oxyhydroxide or precipitating as a hydroxide. As a result, chromium is essentially immobilized as the reduced cation chromium (III) in most rocks, minerals, and soil. Chromium (total) concentrations greater than the WRW PRG are located primarily within the IA OU, with a few locations within the BZ OU. The majority of the sampling locations within the BZ OU contain concentrations below background.

Chromium was used for plating in Building 444, it was present in anion exchange resins in Building 371, and chromates were added to the water as a rust inhibitor used in the Building 712/713 cooling tower (K-H 2005). Spills involving process waste (containing cadmium, chromium, and lead) occurred within Buildings 371, 374, and 559. Chromium compounds were carried forward in the ChemRisk reports as a material of concern; however, chromium did not warrant further evaluation based on insignificant quantities extremely limited in scope and/or duration, or the form of the material was not expected to have significant off-site releases. Emission source maps did not identify buildings or processes in which chromium was used as an emission source. A chromic acid spill occurred in 1989, from the basement of Building 444, which passed through the sanitary sewer system and reached on-site retention Pond B-3. Chromium was identified in concentrations above the RFCA AL near Building 551, requiring an accelerated action.

Uranium (total)

Figure 11 shows the extent of uranium (total) in surface soil. Some uranium (total) concentrations in surface soil are greater than the WRW PRG (0.08 percent or one out of 1,318 locations), but less than 10 times the WRW PRG[14]. The surface soil concentration of uranium (total) greater than the WRW PRG is located within the IA OU. The majority of the sample results located within the BZ OU are below detection limit, with a few below background.

Based on the ChemRisk reports, uranium was used in the basic pit designs and the majority of the weapons components were enriched uranium, depleted uranium, and plutonium (CDH 1992). Building 444 was initially devoted entirely to depleted uranium manufacturing, and enriched

[14] The background mean + 2 StDev. value was taken from the 1995 DOE Background Geochemical Characterization Report (DOE 1995).

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uranium operations were in Building 881 (CDH 1992). Shaping and forming of the uranium components occurred in Building 883 (CDH 1992). Uranium was carried forward in the ChemRisk process as a material of concern (CDH 1992). Uranium was identified as a contaminant in various buildings onsite, as well as above the RFCA ALs requiring an accelerated action in the environment.

Vanadium

Figure 12 shows the extent of vanadium in surface soil. Some vanadium concentrations are greater than background (11.5 percent). Some vanadium concentrations in surface soil are greater than the WRW PRG (0.45 percent), and above 10 times the WRW PRG (0.23 percent). The soil locations greater than the WRW PRG are located within the IA OU. The soil results greater than 10 times the WRW PRG are located within the BZ OU in the area of the former Property Utilization and Disposal (PU&D) storage yard.

Vanadium is considered an essential metallic plant nutrient. At times, exotic materials such as vanadium were used in pit construction in Building 707. Metallurgical operations in Building 865 used vanadium in the development of alloys. Vanadium was also identified with metalworking in Building 444. Based on estimated quantities of vanadium being less than 1 kilogram in inventory, it was not carried forward in the ChemRisk process. Vanadium was not identified above the RFCA AL requiring an accelerated action based on SAPs, SAP Addenda, or Closeout Reports for IHSSs.

5.2.2 PCBs

PCB AOIs identified in surface soil include Aroclors 1254 and 1260. Figure 13 shows the extent of both Aroclors 1254 and 1260 in surface soil. Some Aroclor 1254 concentrations are greater than the WRW PRG (2.5 percent), but less than 10 times the WRW PRG. Some Aroclor 1260 concentrations are greater than the WRW PRG (2.0 percent), but less than 10 times the WRW PRG. The PCB results are located within the IA OU.

5.2.3 SVOCs

SVOC AOIs identified in surface soil are benzo(a)anthracene, benzo(a)pyrene, benzo(b)-fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, and pentachlorophenol (Figures 14 through 19). Pentachlorophenol is a halogenated aromatic semivolatile organic and the others are polynuclear aromatic hydrocarbons (PAHs). PAHs are found in exhaust from motor vehicles and other gasoline and diesel engines; emission from coal-, oil-, and wood-burning stoves and furnaces; cigarette smoke; general soot and smoke of industrial, municipal, and domestic origin; cooked foods, especially charcoal-broiled; incinerators; coke ovens; and asphalt processing and use (EPA 2005).

Benzo(a)anthracene

Figure 14 shows the extent of benzo(a)anthracene in surface soil. Some benzo(a)anthracene concentrations in surface soil are greater than the WRW PRG (0.97 percent), but less than 10 times the WRW PRG. Some benzo(a)anthracene concentrations in surface soil greater than the WRW PRG are located within the IA OU. The majority of the sample results within the BZ OU were not detected.

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Benzo(a)pyrene

Figure 15 shows the extent of benzo(a)pyrene in surface soil. Some benzo(a)pyrene concentrations in surface soil are greater than the WRW PRG (15.9 percent), and greater than 10 times the WRW PRG (0.96 percent). Concentrations greater than the WRW PRG are located primarily within the IA OU, with a few locations in the BZ OU at the Present Landfill. Concentrations greater than 10 times the WRW PRG are all located within the IA OU. A majority of the sample results within the BZ OU did not detect benzo(a)pyrene.

Benzo(b)fluoranthene

Figure 16 shows the extent of benzo(b)fluoranthene in surface soil. Some benzo(b)fluoranthene concentrations in surface soil are greater than the WRW PRG (1.1 percent), but less than 10 times the WRW PRG. Concentrations greater than the WRW PRG are all located within the IA OU.

Dibenz(a,h)anthracene

Figure 17 shows the extent of dibenz(a,h)anthracene in surface soil. Some dibenz(a,h)anthracene concentrations in surface soil are greater than the WRW PRG (2.2 percent), but less than 10 times the WRW PRG. Concentrations greater than the WRW PRG are all located within the IA.

Indeno(1,2,3-cd)pyrene

Figure 18 shows the extent of indeno(1,2,3-cd)pyrene in surface soil. Some indeno(1,2,3-cd)pyrene concentrations in surface soil are greater than the WRW PRG (0.32 percent), but less than 10 times the WRW PRG. Concentrations greater than the WRW PRG are all located within the IA OU.

Pentachlorophenol

Figure 19 shows the extent of pentachlorophenol in surface soil. Some pentachlorophenol concentrations in surface soil are greater than the WRW PRG (0.08 percent or 1 out of 1,195 locations), but less than 10 times the WRW PRG. The one location with a concentration greater than the WRW PRG is located within the IA OU.

5.2.4 VOCs

VOC AOIs identified in surface soil are tetrachloroethene and trichloroethene, which are chlorinated solvents (Figures 20 and 21).

Tetrachloroethene

Figure 20 shows the extent of tetrachloroethene in surface soil. Some tetrachloroethene concentrations in surface soil are greater than the WRW PRG (0.31 percent or 2 out of 650 locations), but less than 10 times the WRW PRG. One of the two locations with levels greater than the WRW PRG is located within the IA OU and the other location is just outside the IA OU in the BZ OU.

Trichloroethene

Figure 21 shows the extent of trichloroethene in surface soil. Some trichloroethene concentrations in surface soil are greater than the WRW PRG (0.15 percent or 1 out of 650 locations), but less than 10 times the WRW PRG. This location is just outside the IA OU in the BZ OU in the same area as the tetrachloroethene concentration.

5.2.5 Radionuclides

Data used for this nature and extent SR (consistent with the CRA) are limited to alpha spectrometry results. Radionuclide AOIs identified in surface soil are americum-241, plutonium-239/240, uranium-233/234, uranium-235, and uranium-238 (Figures 22 through 24).

Americium-241

Figure 22 shows the extent of americium-241 in surface soil. Some americium-241 concentrations in surface soil are greater than the WRW PRG (1.98 percent) and greater than 10 times the WRW PRG (0.4 percent or 8 out of 2,018 locations). Americium-241 concentrations are located in a few areas within the IA OU (a few locations are located under a building basement), but primarily within the BZ OU in an area identified in the CRA Methodology as the Windblown Area EU.

Plutonium-239/240

Figure 23 shows the extent of plutonium-239/240 in surface soil. Some plutonium-239/240 concentrations in surface soil are greater than the WRW PRG (5.4 percent), and greater than 10 times the WRW PRG (0.7 percent). Plutonium-239/240 concentrations are located in a few areas within the IA OU (a few locations are located under a building basement), but primarily within the BZ OU in an area identified in the CRA Methodology as the Windblown Area EU.

Uranium

Figure 24 shows the extent of uranium-233/234, uranium-235, and uranium-238 in surface soil. Some uranium-233/234 concentrations in surface soil are greater than the WRW PRG (0.1 percent or 2 out of 1,892 locations), but less than 10 times the WRW PRG. Some uranium-235 concentrations in surface soil are greater than WRW PRG (0.16 percent or 3 out of 1,892 locations), but less than 10 times the WRW PRG. Some uranium-238 concentrations in surface soil are greater than the WRW PRG (0.32 percent), but less than 10 times the WRW PRG. Uranium concentrations (uranium-233/234, uranium-235, and uranium-238) greater than the WRW PRGs are located primarily within the IA OU, with a few locations within the BZ OU.

5.2.6 Summary of Surface Soil Contamination

Twenty-two surface soil AOIs were identified within the IA and BZ OUs. Eleven of these AOIs were identified as having concentrations in surface soil, with a frequency of detection less than 1 percent greater than the WRW PRGs. Seven of the AOIs were identified to have concentrations in surface soil with a frequency of detection less than 5 percent greater than the WRW PRGs. These 18 AOIs have a low frequency of detection greater than the WRW PRGs indicating a low potential for widespread contamination at RFETS. All 22 AOIs will be evaluated in the fate and transport

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section of the RI/FS Report, and each of these AOIs will be evaluated on an EU basis within the CRA.

5.3 Extent of Subsurface Soil Contamination

Approximately 13,800 subsurface soil locations (Figures 3 and 4) have been sampled and analyzed at RFETS. Subsurface soil samples typically consist of samples composited over some depth interval (for example, 2-foot interval, 4-foot interval, or 6-foot interval), and collected from a single-point borehole location, monitoring well location, or piezometer location. The sample intervals precluded attempts to positively correlate the presence or absence of contamination with specific geologic media. Specifically, a 6-foot composite sample could have included more than one alluvial lithofacies or included vadose zone and saturated materials. Therefore, the contamination distribution discussions in the following sections do not relate contaminant occurrence to geologic or hydrogeologic features, but focus on the lateral and vertical extent of contaminants in both the saturated and unsaturated strata down to bedrock.

Each of the 20 subsurface soil AOIs are mapped on Figures 25 through 45 and are discussed by depth interval and analyte group below. Each analyte is mapped on two figures: one representing the depth intervals of 0.5 to 3.0 feet, 3.0 to 8.0 feet, and 8.0 to 12 feet; and the other figure representing depth intervals of 12 to 30 feet, 30 to 50 feet, and greater than 50 feet. PCBs and uranium isotopes were each combined onto one figure.

5.3.1 Subsurface Soil (0.5 to 3.0 feet)

The 11 AOIs in subsurface soil at a depth of 0.5 to 3.0 feet are listed below.

Subsurface Soil AOIs (0.5 to 3.0 feet)	Subsurface Soil AOIs (>10 X WRW PRG)
Metals	
Arsenic	
Chromium (total)	
Lead	
PCBs	
Aroclor 1254	
Aroclor 1260	
SVOCs	
Benzo(a)pyrene	
Dibenz (a,h)anthracene	
VOCs	
Tetrachloroethene	Tetrachloroethene
Trichloroethene	
Radionuclides	
Americium-241	Americium-241
Plutonium-239/240	Plutonium-239/240

5.3.1.1 Metals

Metal AOIs identified in subsurface soil from 0.5 to 3 feet are arsenic, chromium, and lead (Figures 25 through 27, respectively).

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Arsenic

Figure 25 shows the extent of arsenic in subsurface soil at depths between 0.5 and 3.0 feet, indicated by sampling locations with a circle. Some arsenic concentrations are greater than background (1.8 percent). Some arsenic concentrations in subsurface soil are greater than the WRW PRG (0.35 percent), but below 10 times the WRW PRG. Arsenic concentrations are located primarily within the IA OU and one location (CN44-001) is co-located with one of the surface soil samples with a concentration greater than the WRW PRG. Arsenic concentrations between 0.5 and 3.0 feet were all below background in all locations within the BZ OU. (See Section 5.2.1 for a discussion of site process knowledge associated with arsenic.)

Chromium (total)

Figure 26 shows the extent of chromium (total) in subsurface soil at depths between 0.5 and 3.0 feet, indicated by sampling locations with a circle. Some chromium (total) concentrations are greater than background (3.2 percent). Some chromium (total) concentrations in subsurface soil are greater than the WRW PRG (0.06 percent or 1 out of 1,739 locations), but below 10 times the WRW PRG. Chromium (total) concentrations were compared to the more conservative chromium (VI) PRG versus chromium (III), because chromium (VI) is more indicative of material used in on-site processes. However, the chromium (VI) sample results available (collected in areas where process contaminants were expected) were all below the WRW PRG for chromium (VI). Chromium concentrations in soil are strongly related to the parent-rock source. Chromium is essentially immobilized as the reduced cation chromium (III) in most rocks and minerals. Chromium is present almost exclusively as chromium (III) adsorbed to organic matter and iron oxyhydroxide, precipitated as chromium hydroxide, or as a mineral (chromium clay and micas). In soil, organic matter and ferrous iron act as electron donors and readily reduce chromium (VI) to chromium (III) with chromium being sorbed to organic matter and iron oxyhydroxide or precipitating as a hydroxide. As a result, chromium is essentially immobilized as the reduced cation chromium (III) in most rocks, minerals, and soil. The chromium (total) concentration is located within the IA OU. None of these locations are co-located with surface soil locations. Chromium (total) concentrations from 0.5 to 3.0 feet were all below background in all locations within the BZ OU. (See Section 5.2.1 for a discussion of site process knowledge associated with chromium.)

Lead

Figure 27 shows the extent of lead in subsurface soil at depths between 0.5 and 3.0 feet, indicated by sampling locations with a circle. Some lead concentrations are greater than background (8.4 percent). Some lead concentrations in subsurface soil are greater than the WRW PRG (0.2 percent or 3 out of 1744), but below 10 times the WRW PRG. The lead concentrations are located within the IA OU and in the BZ OU in the area formerly known as the East Firing Range (both the North and South Target Areas). None of these locations are co-located with surface soil locations. Lead concentrations from 0.5 to 3.0 feet were below background in a majority of the locations within the BZ OU. (See Section 5.2.1 for a discussion of site process knowledge associated with lead.)

5.3.1.2 PCBs

PCB AOIs identified in subsurface soil are Aroclors 1254 and 1260. Figure 28 shows the extent of both Aroclors 1254 and 1260 in subsurface soil. Some Aroclor 1254 concentrations are greater than the WRW PRG (0.51 percent or 2 out of 389 locations), but less than 10 times the WRW PRG.

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Some Aroclor 1260 concentrations are greater than WRW PRG (0.26 percent or 1 out of 389 locations), but less than 10 times the WRW PRG. The elevated concentration of PCBs is located within the BZ OU, in an area known as the East Trenches. None of the Aroclor 1254 and Aroclor 1260 locations are co-located with surface soil locations.

5.3.1.3 SVOCs

SVOC AOIs identified in subsurface soil are benzo(a)pyrene and dibenz(a,h)anthracene (Figures 30 and 32) and both are considered PAHs. PAHs are found in exhaust from motor vehicles and other gasoline and diesel engines; emission from coal-, oil-, and wood-burning stoves and furnaces; cigarette smoke; general soot and smoke of industrial, municipal, and domestic origin; cooked foods, especially charcoal-broiled; incinerators; coke ovens; and asphalt processing and use (EPA 2005).

Benzo(a)pyrene

Figure 30 shows the extent of benzo(a)pyrene in subsurface soil at depths between 0.5 and 3.0 feet, indicated by sampling locations with a circle. Some benzo(a)pyrene concentrations in subsurface soil are greater than the WRW PRG (1.0 percent), but below 10 times the WRW PRG. Benzo(a)pyrene concentrations are located primarily within the IA OU, with one location in the BZ OU in the area of the East Trenches. Two locations are co-located with three surface soil locations (BX39-008, and CF47-008).

Dibenz(a,h)anthracene

Figure 32 shows the extent of dibenz(a,h)anthracene in subsurface soil at depths between 0.5 and 3.0 feet, indicated by sampling locations with a circle. Some dibenz(a,h)anthracene concentrations in subsurface soil are greater than the WRW PRG (0.17 percent or at 1 out of 595 locations), but below 10 times the WRW PRG. The one dibenz(a,h)anthracene concentration is located within the IA OU. This location is not co-located with surface soil locations.

5.3.1.4 VOCs

VOC AOIs identified in subsurface soil are tetrachloroethene and trichloroethene (Figures 33 and 34).

Tetrachloroethene

Figure 33 shows the extent of tetrachloroethene in subsurface soil at depths between 0.5 and 3.0 feet, indicated by sampling locations with a circle. Some tetrachloroethene concentrations in subsurface soil are greater than the WRW PRG (0.3 percent), and greater than 10 times the WRW PRG (0.05 percent or 1 out of 2,032 locations). The concentrations of tetrachloroethene greater than WRW PRG and 10 times the WRW PRG are all located within the BZ OU in an area known as the East Trenches. One of these locations is co-located with a surface soil location (CQ41-028).

Trichloroethene

Figure 34 shows the extent of trichloroethene in subsurface soil at depths between 0.5 and 3.0 feet, indicated by sampling locations with a circle. Some trichloroethene concentrations in subsurface soil are greater than the WRW PRG (0.2 percent or 3 out of 2,032 locations), but below 10 times

the WRW PRG. The concentrations of trichloroethene greater than the WRW PRG are all located within the BZ OU in an area known as the East Trenches. One of these locations is co-located with a surface soil location (CQ41-028).

5.3.1.5 Radionuclides

Radionuclide AOIs identified in subsurface soil are americium-241 and plutonium-239/240 (Figures 35 and 36).

Americium-241 and plutonium-239/240 concentrations are located within the IA OU and in an area east of the IA OU identified in the CRA as the Windblown Area EU located within the BZ OU. Concentrations of americium-241 (in 1 out of 802 locations) and plutonium-239/240 (in 2 out of 813 locations) were also greater than 10 times the WRW PRGs.

Americium-241

Figure 35 shows the extent of americium-241 in subsurface soil at depths between 0.5 and 3.0 feet, indicated by sampling locations with a circle. Some americium-241 concentrations in subsurface soil are greater than the WRW PRG (0.4 percent), and greater than 10 times the WRW PRG (0.13 percent or 1 out of 793 locations). The concentrations of americium-241 greater than the WRW PRG and greater than 10 times the WRW PRG are located within the IA OU in the former 700 Area. All three locations are co-located with three surface soil locations (CE45-031, CE46-030, and CF45-063).

Plutonium-239/240

Figure 36 shows the extent of plutonium-239/240 in subsurface soil at depths between 0.5 and 3.0 feet, indicated by sampling locations with a circle. Some plutonium-239/240 concentrations in subsurface soil are greater than the WRW PRG (0.5 percent), and greater than 10 times the WRW PRG (0.25 percent or 2 out of 804 locations). The concentrations of plutonium-239/240 greater than the WRW PRG are located within the BZ OU. The location of the concentrations greater than 10 times the WRW PRG is located within the IA OU in the former 700 Area. Four concentrations (four locations) are co-located with four locations in surface soil (CE45-031, CE45-050, CE46-030, and CF45-063). One of these concentrations is greater than 10 times the WRW PRG.

5.3.1.6 Summary of Subsurface Soil Contamination (0.5 to 3.0 feet)

Eleven subsurface soil AOIs were identified within the IA and BZ OUs at a depth of 0.5 to 3.0 feet. Ten of these AOIs had concentrations in subsurface soil greater than the WRW PRGs with a frequency of detection of less than 1 percent, indicating a low potential for widespread contamination at RFETS. One AOI [benzo(a)pyrene] had concentrations in subsurface soil greater than the WRW PRG with a frequency of detection just slightly above 1 percent (1.01 percent). All of these AOIs will be evaluated in the fate and transport section of the RI/FS Report and each of these AOIs will be evaluated on an EU basis within the CRA.

5.3.2 Subsurface Soil (3.0 to 8.0 feet)

The 12 AOIs in subsurface soil at a depth of 3.0 to 8.0 feet are listed below.

Subsurface Soil AOIs (3.0 to 8.0 feet)	Subsurface Soil AOIs (>10 X WRW PRG)
Metals	
Arsenic	
Chromium (total)	Chromium (total)
Lead	
PCBs	
Aroclor 1254	Aroclor 1254
Aroclor 1260	
SVOCs	
Benzo(a)pyrene	
VOCs	
Tetrachloroethene	Tetrachloroethene
Trichloroethene	Trichloroethene
Radionuclides	
Americium-241	
Plutonium-239/240	Plutonium-239/240
Uranium-235	
Uranium-238	

5.3.2.1 Metals

Metal AOIs identified in subsurface soil are arsenic, chromium, and lead (Figures 25, 26, and 27). The depth interval of 3.0 to 8.0 feet is identified on these figures using a square for each sampling location.

Arsenic

Figure 25 shows the extent of arsenic in subsurface soil at depths between 3.0 and 8.0 feet. Some arsenic concentrations are greater than background (2.0 percent). Some arsenic concentrations in subsurface soil are greater than the WRW PRG (0.29 percent), but below 10 times the WRW PRG. Arsenic concentrations are located primarily within the IA OU and only one location (CF46-025) is co-located with one of the surface soil locations with concentrations greater than the WRW PRG. None of these locations are co-located with subsurface soil locations above this depth interval. Arsenic concentrations from 3.0 to 8.0 feet were all below background in all locations within the BZ OU. (See Section 5.2.1 for a discussion of site process knowledge associated with arsenic.)

Chromium (total)

Figure 26 shows the extent of chromium (total) in subsurface soil at depths between 3.0 and 8.0 feet. Some chromium (total) concentrations are greater than background (3.1 percent). Some chromium (total) concentrations in subsurface soil are greater than the WRW PRG (0.29 percent), and greater than 10 times the WRW PRG (0.14 percent or 2 out of 1,400 locations). Chromium (total) concentrations were compared to the more conservative chromium (VI) PRG versus chromium (III), because chromium (VI) is more indicative of material used in on-site processes. However, the chromium (VI) sample results that are available (collected in areas where process contaminants were expected) were all below the WRW PRG for chromium (VI). Chromium concentrations in soil are strongly related to the parent-rock source. Chromium is essentially immobilized as the reduced cation chromium (III) in most rocks and minerals. Chromium is present almost exclusively as chromium (III) adsorbed to organic matter and iron oxyhydroxide, precipitated as chromium hydroxide, or as a mineral (chromium clay and micas). In soil, organic

matter and ferrous iron act as electron donors and readily reduce chromium (VI) to chromium (III) with chromium being sorbed to organic matter and iron oxyhydroxide or precipitating as a hydroxide. As a result, chromium is essentially immobilized as the reduced cation chromium (III) in most rocks, minerals, and soil. The chromium (total) concentrations greater than the WRW PRG are located within the IA OU and the BZ OU, in the Ash Pits area. None of these locations are co-located with subsurface soil locations above this depth interval. For chromium (total) concentrations greater than 10 times the WRW PRG, one is located within the IA OU in the former 700 Area, and one is located within the BZ OU in an area known as the East Trenches. Chromium (total) concentrations from 3.0 to 8.0 feet were primarily below background within the BZ OU. (See Section 5.2.1 for a discussion of site process knowledge associated with chromium.)

Lead

Figure 27 shows the extent of lead in subsurface soil at depths between 3.0 and 8.0 feet. Some lead concentrations are greater than background (4.1 percent). Some lead concentrations in subsurface soil are greater than the WRW PRG (0.07 percent or 1 out of 1,405 locations), but below 10 times the WRW PRG. The elevated lead concentration is located within the BZ OU in an area known as the Ash Pits. None of these locations are co-located with locations above this depth interval. Lead concentrations from 3.0 to 8.0 feet were below background in a majority of the locations within the BZ OU and within all locations within the IA OU. (See Section 5.2.1 for a discussion of site process knowledge associated with lead.)

5.3.2.2 PCBs

PCB AOIs identified in subsurface soil are Aroclors 1254 and 1260. Figure 28 shows the extent of both Aroclors 1254 and 1260 in subsurface soil. Some Aroclor 1254 concentrations are greater than the WRW PRG (1.7 percent), and greater than 10 times the WRW PRG (0.21 percent or 1 out of 483 locations). Some Aroclor 1260 concentrations are greater than the WRW PRG (0.8 percent), but less than 10 times the WRW PRG. The elevated concentration of PCBs is located within the BZ OU, in an area known as the East Trenches. Three of the Aroclor 1254 concentrations greater than the WRW PRG (two are in the same location) are co-located with subsurface soil locations above this depth interval (CQ41-028 and CQ41-029). Two of the Aroclor 1260 locations (in the same location) are co-located with a subsurface soil location above this depth interval (CQ41-029).

5.3.2.3 SVOCs

The SVOC AOI identified in subsurface soil is benzo(a)pyrene (Figures 30), indicated by sampling locations with a square. Benzo(a)pyrene is considered a PAH. PAHs are found in exhaust from motor vehicles and other gasoline and diesel engines; emission from coal-, oil-, and wood-burning stoves and furnaces; cigarette smoke; general soot and smoke of industrial, municipal, and domestic origin; cooked foods, especially charcoal-broiled; in incinerators; coke ovens; and asphalt processing and use (EPA 2005).

Figure 30 shows the extent of benzo(a)pyrene in subsurface soil at depths between 3.0 and 8.0 feet. Some benzo(a)pyrene concentrations in subsurface soil are greater than the WRW PRG (0.9 percent), but below 10 times the WRW PRG. Benzo(a)pyrene concentrations are located within the IA OU and BZ OU. Two of these concentrations (within the same location) are co-located with a location in surface soil (CF46-021) and none in the depth interval of 0.5 to 3.0 feet.

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5.3.2.4 VOCs

VOC AOIs identified in subsurface soil are tetrachloroethene and trichloroethene (Figures 33 and 34), indicated by sampling locations with a square.

Tetrachloroethene

Figure 33 shows the extent of tetrachloroethene in subsurface soil at depths between 3.0 and 8.0 feet. Some tetrachloroethene concentrations in subsurface soil are greater than the WRW PRG (1.2 percent), and greater than 10 times the WRW PRG (0.5 percent). The concentrations of tetrachloroethene greater than the WRW PRG and 10 times the WRW PRG are located within the BZ OU in an area known as the East Trenches and within the IA OU. Four concentrations (in three locations) are co-located with three locations in the depth interval 0.5 to 3.0 feet (CQ41-041, CQ41-028, and CQ41-029). Location CQ41-028 is also co-located with a surface soil location.

Trichloroethene

Figure 34 shows the extent of trichloroethene in subsurface soil at depths between 3.0 and 8.0 feet. Some trichloroethene concentrations in subsurface soil are greater than the WRW PRG (0.5 percent), and greater than 10 times the WRW PRG (0.1 percent or 2 out of 1,844 locations). The concentrations of trichloroethene greater than WRW PRG and 10 times the WRW PRG are all located within the BZ OU in an area known as the East Trenches. Two concentrations (in one location) are co-located at one location in the depth interval 0.5 to 3.0 feet (CQ41-029), but this location is not co-located with surface soil.

5.3.2.5 Radionuclides

Radionuclide AOIs identified in subsurface soil are americium-241, plutonium-239/240, uranium-235, and uranium-238 (Figures 35 through 37), indicated by sampling locations with a square.

Americium-241

Figure 35 shows the extent of americium-241 in subsurface soil at depths between 3.0 and 8.0 feet. Some americium-241 concentrations in subsurface soil are greater than the WRW PRG (0.35 percent), but less than 10 times the WRW PRG. The concentrations of americium-241 greater than the WRW PRG are located within the BZ OU in an area known as the East Trenches. None of these locations are co-located with locations above this depth interval.

Plutonium-239/240

Figure 36 shows the extent of plutonium-239/240 in subsurface soil at depths between 3.0 and 8.0 feet. Some plutonium-239/240 concentrations in subsurface soil are greater than the WRW PRG (0.1.0 percent), and greater than 10 times the WRW PRG (0.23 percent or 2 out of 874 locations). The concentrations of plutonium-239/240 greater than the WRW PRG are located within the BZ OU in an area identified in the CRA Methodology as the Windblown Area EU and in the East Trenches area, and within the IA OU in the former 700 Area. The locations of the concentrations greater than 10 times the WRW PRG are located within the BZ OU in the East Trenches area. None of these locations are co-located with subsurface soil locations above this depth interval.

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Uranium

Figure 37 shows the extent of uranium-235 and uranium-238 in subsurface soil at depths between 3.0 and 8.0 feet. Some uranium-235 concentrations in subsurface soil are greater than the WRW PRG (0.34 percent), but below 10 times the WRW PRG. Some uranium-238 concentrations in subsurface soil are greater than the WRW PRG (0.45 percent), but less than 10 times the WRW PRG. Uranium concentrations are located within the BZ OU in the area of the Ash Pits. None of the uranium-235 and uranium-238 locations are co-located with surface soil locations. There are four locations with concentrations greater than the WRW PRGs. Two locations include both uranium-235 and the uranium-238 concentrations are greater than the WRW PRGs (55994 and 56393).

5.3.2.6 Summary of Subsurface Soil Contamination (3.0 to 8.0 feet)

Twelve subsurface soil AOIs were identified within the IA and BZ OUs at a depth interval of 3.0 to 8.0 feet. Nine of these AOIs were identified as having concentrations in subsurface soil greater than the WRW PRGs with a frequency of detection of less than 1 percent. Three of the AOIs were identified having concentrations in subsurface soil greater than the WRW PRGs with a frequency of detection of slightly greater than 1 percent and less than 5 percent (1.03 to 1.7 percent). All of these AOIs indicate a low potential for widespread contamination at RFETS. All of these AOIs will be evaluated in the fate and transport section of the RI/FS Report, and each of these AOIs will be evaluated on an EU basis within the CRA.

5.3.3 Subsurface Soil (8.0 to 12.0 feet)

The 13 AOIs in subsurface soil at a depth of 8.0 feet to 12.0 feet are listed below.

Subsurface Soil AOIs (8.0 to 12.0 feet)	Subsurface Soil AOIs (>10 X WRW PRG)
Metals	
Arsenic	
Chromium (total)	Chromium (total)
PCBs	
Aroclor 1016	
Aroclor 1254	Aroclor 1254
Aroclor 1260	
SVOCs	
Benzo(a)anthracene	
Benzo(a) pyrene	
Benzo(b)fluoranthene	
VOCs	
Tetrachloroethene	Tetrachloroethene
Trichloroethene	Trichloroethene
Radionuclides	
Plutonium-239/240	
Uranium-235	
Uranium-238	

5.3.3.1 Metals

Metal AOIs identified in subsurface soil are arsenic, and chromium (Figures 25 and 26). The depth

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interval of 8.0 to 12.0 feet is identified on these figures using a triangle for each sampling location.

Arsenic

Figure 25 shows the extent of arsenic in subsurface soil at depths between 8.0 and 12.0 feet. Arsenic concentrations are greater than background (0.7 percent). Some arsenic concentrations in subsurface soil are greater than the WRW PRG (0.35 percent or 2 out of 570 locations), but below 10 times the WRW PRG. The elevated arsenic concentrations are located within the BZ OU. None of these locations are co-located with subsurface soil locations above this depth interval. Arsenic concentrations from 8.0 to 12.0 feet were all below background in all locations within the IA OU and a majority of the concentrations within the BZ OU were also below background. (See Section 5.2.1 for a discussion of site process knowledge associated with arsenic.)

Chromium (total)

Figure 26 shows the extent of chromium (total) in subsurface soil at depths between 8.0 and 12.0 feet. Some chromium (total) concentrations are greater than background (3.4 percent). Some chromium (total) concentrations in subsurface soil are greater than the WRW PRG (0.18 percent or 1 out of 568 locations), and greater than 10 times the WRW PRG (0.18 percent or 1 out of 568 locations). Chromium (total) concentrations were compared to the more conservative chromium (VI) PRG versus chromium (III), because chromium (VI) is more indicative of material used in on-site processes. However, the chromium (VI) sample results available (collected in areas where process contaminants were expected) were all below the WRW PRG for chromium (VI). Chromium concentrations in soil are strongly related to the parent-rock source. Chromium is essentially immobilized as the reduced cation chromium (III) in most rocks and minerals. Chromium is present almost exclusively as chromium (III) adsorbed to organic matter and iron oxyhydroxide, precipitated as chromium hydroxide, or as a mineral (chromium clay and micas). In soil, organic matter and ferrous iron act as electron donors and readily reduce chromium (VI) to chromium (III) with chromium being sorbed to organic matter and iron oxyhydroxide or precipitating as a hydroxide. As a result, chromium is essentially immobilized as the reduced cation chromium (III) in most rocks, minerals, and soil. The chromium (total) concentration greater than the WRW PRG and greater than 10 times the WRW PRG is located within the BZ OU, in the Ash Pits area. None of these locations are co-located with subsurface soil locations above this depth interval. Chromium (total) concentrations from 8.0 to 12.0 feet were primarily below background within the BZ OU and IA OU. (See Section 5.2.1 for a discussion of site process knowledge associated with chromium.)

5.3.3.2 PCBs

PCB AOIs identified in subsurface soil are Aroclors 1016, 1254, and 1260. Figure 28 shows the extent of Aroclors 1016, 1254, and 1260 in subsurface soil. Some Aroclor 1016 concentrations are greater than the WRW PRG (0.51 percent or 1 out of 197 locations). Some Aroclor 1254 concentrations are greater than the WRW PRG (3.1 percent), and greater than 10 times the WRW PRG (0.51 percent or 1 out of 197 locations). Some Aroclor 1260 concentrations are greater than the WRW PRG (1.5 percent), but less than 10 times the WRW PRG. None of the Aroclor 1016 locations are co-located with subsurface locations above this depth interval. The elevated concentration of PCBs is located within the BZ OU, in an area known as the East Trenches. Both of the locations with Aroclor 1254 greater than the WRW PRG (and including the location with the concentration greater than 10 times the WRW PRG) (all the same location) are co-located with a

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subsurface soil location above this depth interval (CQ41-005). The one Aroclor 1260 location is co-located with a subsurface soil location above this depth interval (CQ41-005).

5.3.3.3 SVOCs

SVOC AOIs identified in subsurface soil are benzo(a)anthracene, benzo(a)pyrene and benzo(b)fluoranthene (Figures 29 through 31), with sampling locations identified by a triangle. These SVOCs are considered PAHs. PAHs are found in exhaust from motor vehicles and other gasoline and diesel engines; emission from coal-, oil-, and wood-burning stoves and furnaces; cigarette smoke; general soot and smoke of industrial, municipal, and domestic origin; cooked foods, especially charcoal-broiled; incinerators; coke ovens; and asphalt processing and use (EPA 2005).

Benzo(a)anthracene

Figure 29 shows the extent of benzo(a)anthracene in subsurface soil at depths between 8.0 and 12.0 feet. Some benzo(a)anthracene concentrations in subsurface soil are greater than the WRW PRG (0.37 percent or 1 out of 270 locations), but below 10 times the WRW PRG. Benzo(a)anthracene concentrations are located within the IA OU in the area of the Original Landfill. This location is not co-located with any surface soil locations.

Benzo(a)pyrene

Figure 30 shows the extent of benzo(a)pyrene in subsurface soil at depths between 8.0 and 12.0 feet. Some benzo(a)pyrene concentrations in subsurface soil are greater than the WRW PRG (1.9 percent), but below 10 times the WRW PRG. Benzo(a)pyrene concentrations are located primarily within the IA OU, with locations within the Original Landfill and in the area of the former 700 Area. One of these concentrations is co-located with a location in the depth interval of 3.0 to 8.0 feet (10395).

Benzo(b)fluoranthene

Figure 31 shows the extent of benzo(b)fluoranthene in subsurface soil at depths between 8.0 and 12.0 feet. Some benzo(b)fluoranthene concentrations in subsurface soil are greater than the WRW PRG (0.37 percent or 1 out of 268 locations), but below 10 times the WRW PRG. Benzo(b)fluoranthene concentrations are located within the IA OU in the area of the Original Landfill. This location is not co-located with any surface soil locations.

5.3.3.4 VOCs

VOC AOIs identified in subsurface soil are tetrachloroethene and trichloroethene (Figures 33 and 34), indicated by sampling locations with a triangle.

Tetrachloroethene

Figure 33 shows the extent of tetrachloroethene in subsurface soil at depths between 8.0 and 12.0 feet. Some tetrachloroethene concentrations in subsurface soil are greater than the WRW PRG (1.4 percent), and greater than 10 times the WRW PRG (0.7 percent). The concentrations of tetrachloroethene greater than the WRW PRG and 10 times the WRW PRG are located within the

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BZ OU in an area known as the East Trenches. All four concentrations (three locations) at this depth interval are co-located with six concentrations (three locations) above this depth interval at 3.0 to 8.0 feet (CQ41-005, CQ41-025, and CQ41-071). These locations are not co-located with locations above 3.0 feet.

Trichloroethene

Figure 34 shows the extent of trichloroethene in subsurface soil at depths between 8.0 and 12.0 feet. Some trichloroethene concentrations in subsurface soil are greater than the WRW PRG (0.8 percent), and greater than 10 times the WRW PRG (0.35 percent). The concentrations of trichloroethene greater than the WRW PRG and 10 times the WRW PRG are all located within the BZ OU in an area known as the East Trenches. All three of these concentrations (two locations) are co-located with two locations from 3.0 feet to 8.0 feet (CQ41-005 and CQ41-025), but are not co-located above 3.0 feet.

5.3.3.5 Radionuclides

Radionuclide AOIs identified in subsurface soil are plutonium-239/240, uranium-235, and uranium-238 (Figures 36 and 37), indicated by sampling locations with a triangle.

Plutonium-239/240

Figure 36 shows the extent of plutonium-239/240 in subsurface soil at depths between 3.0 and 8.0 feet. Some plutonium-239/240 concentrations in subsurface soil are greater than the WRW PRG (0.5 percent), but below 10 times the WRW PRG. The concentrations of plutonium-239/240 greater than the WRW PRG are located within the IA OU in the former 700 Area. One location is co-located with a sample from 3.0 to 8.0 feet (12795), but none above this depth interval.

Uranium

Figure 37 shows the extent of uranium-235 and uranium-238 in subsurface soil at depths between 8.0 and 12.0 feet. Some uranium-235 concentrations in subsurface soil are greater than the WRW PRG (0.51 percent), but below 10 times the WRW PRG. Some uranium-238 concentrations in subsurface soil are greater than the WRW PRG (0.51 percent), but less than 10 times the WRW PRG. Uranium concentrations are located within the BZ OU in the area of the Ash Pits. None of the uranium-235 or uranium-238 locations are co-located with subsurface soil locations above this depth interval. Two locations include both the uranium-235 and the uranium-238 concentrations greater than the WRW PRG (55694 and 56893).

5.3.3.6 Summary of Subsurface Soil Contamination (8.0 to 12.0 feet)

Thirteen subsurface soil AOIs were identified within the IA and BZ OUs at a depth interval of 8.0 to 12.0 feet. Nine of these AOIs have concentrations greater than the WRW PRGs in subsurface soil with a frequency of detection less than 1 percent. Four of the AOIs were identified at concentrations in subsurface soil greater than the WRW PRGs with a frequency of detection of less than 5 percent. All of these AOIs indicate a low potential for widespread contamination at RFETS. These AOIs will be evaluated in the fate and transport section of the RI/FS Report, and each will be evaluated on an EU basis within the CRA.

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5.3.4 Subsurface Soil (12.0 to 30.0 feet)

The eight AOIs in subsurface soil at a depth of 12.0 to 30.0 feet are listed below.

Subsurface Soil AOIs (12.0 to 30.0 feet)	Subsurface Soil AOIs (>10 X WRW PRG)
Metals	
Chromium (total)	
PCBs	
Aroclor 1260	
VOCs	
1,1,2,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane
Carbon Tetrachloride	Carbon Tetrachloride
Chloroform	Chloroform
Methylene chloride	
Tetrachloroethene	Tetrachloroethene
Trichloroethene	Trichloroethene

5.3.4.1 Metals

The metal AOI identified in subsurface soil is chromium (total) (Figure 38), and the depth interval of 12.0 to 30.0 feet is identified on this figure using a circle for each sampling location.

Chromium (total)

Figure 38 shows the extent of chromium (total) in subsurface soil at depths between 12.0 and 30.0 feet. Some chromium (total) concentrations are greater than background (1.8 percent). Some chromium (total) concentrations in subsurface soil are greater than the WRW PRG (0.15 percent or 1 out of 667 locations), but less than 10 times the WRW PRG. Chromium (total) concentrations were compared to the more conservative chromium (VI) PRG versus chromium (III), because chromium (VI) is more indicative of material used in on-site processes. However, the chromium (VI) sample results available (collected in areas where process contaminants were expected) were all below the WRW PRG for chromium (VI). Chromium concentrations in soil are strongly related to the parent-rock source. Chromium is essentially immobilized as the reduced cation chromium (III) in most rocks and minerals. Chromium is present almost exclusively as chromium (III) adsorbed to organic matter and iron oxyhydroxide, precipitated as chromium hydroxide, or as a mineral (chromium clay and micas). In soil, organic matter and ferrous iron act as electron donors and readily reduce chromium (VI) to chromium (III) with chromium being sorbed to organic matter and iron oxyhydroxide or precipitating as a hydroxide. As a result, chromium is essentially immobilized as the reduced cation chromium (III) in most rocks, minerals, and soil. The chromium (total) concentrations greater than the WRW PRG are located within the BZ OU. None of these locations are co-located with subsurface soil locations above this depth interval. Chromium (total) concentrations from 12.0 to 30.0 feet were primarily below background within the BZ OU and IA OU. (See Section 5.2.1 for a discussion of site process knowledge associated with chromium.)

5.3.4.2 PCBs

The PCB AOI identified in subsurface soil is Aroclor 1260. Figure 39 shows the extent of Aroclor 1260 in subsurface soil. Some Aroclor 1260 concentrations are greater than the WRW PRG (1.8

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percent), but less than 10 times the WRW PRG. The elevated concentration of Aroclor 1260 is located within the IA OU. None of these locations are co-located with subsurface soil locations above this depth interval.

5.3.4.3 VOCs

Six VOC AOIs identified in subsurface soil are 1,1,2,2-tetrachloroethane, carbon tetrachloride, chloroform, methylene chloride, tetrachloroethene, and trichloroethene (Figures 40 through 45), indicated by sampling locations with a circle.

1,1,2,2-Tetrachloroethane

Figure 40 shows the extent of 1,1,2,2-tetrachloroethane in subsurface soil at depths between 12.0 and 30.0 feet. Some 1,1,2,2-tetrachloroethane concentrations in subsurface soil are greater than the WRW PRG (0.1 percent or 1 out of 1,149 locations), and greater than 10 times the WRW PRG (0.1 percent or 1 out of 1,149 locations). The concentrations of 1,1,2,2-tetrachloroethane greater than the WRW PRG and 10 times WRW PRG are in the same location within the IA OU. There are no concentrations of 1,1,2,2-tetrachloroethane above this depth interval that are greater than the WRW PRG.

Carbon Tetrachloride

Figure 41 shows the extent of carbon tetrachloride in subsurface soil at depths between 12.0 and 30.0 feet. Some carbon tetrachloride concentrations in subsurface soil are greater than the WRW PRG (0.86 percent), and greater than 10 times the WRW PRG (0.43 percent). The concentrations of carbon tetrachloride greater than the WRW PRG and 10 times the WRW PRG are within the IA OU. There are no concentrations of carbon tetrachloride above this depth interval that are greater than WRW PRG.

Chloroform

Figure 42 shows the extent of chloroform in subsurface soil at depths between 12.0 and 30.0 feet. Some chloroform concentrations in subsurface soil are greater than the WRW PRG (0.1 percent or at 1 out of 1,166 locations), and greater than 10 times the WRW PRG (0.1 percent or 1 out of 1,166 locations). The concentrations of chloroform greater than the WRW PRG and 10 times the WRW PRG are in the same location within the IA OU. There are no concentrations of chloroform above this depth interval that are greater than the WRW PRG.

Methylene Chloride

Figure 43 shows the extent of methylene chloride in subsurface soil at depths between 12.0 and 30.0 feet. Some methylene chloride concentrations in subsurface soil are greater than the WRW PRG (0.1 percent or 1 out of 1,166 locations), but less than 10 times the WRW PRG. The concentration of methylene chloride greater than the WRW PRG is within the IA OU. There are no concentrations of methylene chloride above this depth interval that are greater than the WRW PRG.

Tetrachloroethene

Figure 44 shows the extent of tetrachloroethene in subsurface soil at depths between 12.0 and 30.0 feet. Some tetrachloroethene concentrations in subsurface soil are greater than the WRW PRG

(0.77 percent), and greater than 10 times the WRW PRG (0.26 percent or 3 out of 1,166 locations). The concentrations of tetrachloroethene greater than the WRW PRG are located within the BZ OU in an area known as the East Trenches and within the IA OU. Three concentrations (two locations) at this depth interval are co-located with two concentrations (two locations) above this depth interval at 8.0 to 12.0 feet (CQ41-074 and CQ41-083). These locations are not co-located with locations above 8.0 feet.

Trichloroethene

Figure 45 shows the extent of trichloroethene in subsurface soil at depths between 12.0 and 30.0 feet. Some trichloroethene concentrations in subsurface soil are greater than the WRW PRG (0.34 percent), and greater than 10 times the WRW PRG (0.17 percent or 2 out of 1,165 locations). The concentration of trichloroethene greater than the WRW PRG is located within the BZ OU in an area known as the East Trenches. This location is not co-located with locations above this depth interval.

5.3.4.4 Summary of Subsurface Soil Contamination (12.0 to 30.0 feet)

Eight subsurface soil AOIs were identified within the IA and BZ OUs at a depth interval of 12.0 to 30.0 feet. Seven of these AOIs have concentrations in subsurface soil greater than the WRW PRGs with a frequency of detection less than 1 percent. One of the AOIs was identified to have concentrations in subsurface soil greater than the WRW PRGs with a frequency of detection of less than 5 percent (1.8 percent). All of these AOIs indicate a low potential for widespread contamination at RFETS. These AOIs will be evaluated in the fate and transport section of the RI/FS report and each will be evaluated on an EU basis within the CRA.

5.3.5 Subsurface Soil (30.0 to 50.0 feet)

No AOIs were identified in subsurface soil at a depth of 30.0 to 50.0 feet.

5.3.6 Subsurface Soil (Greater than 50.0 feet)

No AOIs were identified in subsurface soil at a depth of greater than 50.0 feet (to a maximum depth of 209 feet).

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Table 1 Sitewide Surface Soil Background Data Summary

Analyte	Unit	Number of Samples	Number of Detects	Percent Detected	Maximum Concentration Detected	Minimum Concentration Detected	Mean Concentration	Standard Deviation	Mean+2StDev
Aluminum	mg/kg	20	20	100%	17,100	4,050	10,203	3,256	16,715
Americium-241	pCi/g	50	50	100%	0.025	1.00E-03	0.010	0.006	0.022
Ammonia	mg/kg	20	13	65%	7.00	1.00	2.03	1.90	5.83
Antimony	mg/kg	20					0.279	0.078	0.436
Arsenic	mg/kg	20	20	100%	9.60	2.30	6.09	2.00	10.1
Barium	mg/kg	20	20	100%	134	45.7	102	19.4	141
Beryllium	mg/kg	20	20	100%	0.900	0.240	0.660	0.152	0.964
Cadmium	mg/kg	20	13	65%	2.30	0.670	0.708	0.455	1.62
Calcium	mg/kg	20	20	100%	4,550	1,450	2,965	750	4,464
Cesium	mg/kg	20					6.54	0.224	6.99
Cesium-134	pCi/g	70	70	100%	0.300	0.050	0.148	0.059	0.266
Cesium-137	pCi/g	70	70	100%	1.80	0.070	0.911	0.391	1.69
Chromium	mg/kg	20	20	100%	16.9	5.50	11.2	2.78	16.8
Cobalt	mg/kg	20	20	100%	11.2	3.40	7.27	1.79	10.9
Copper	mg/kg	20	20	100%	16.0	5.20	13.0	2.58	18.1
Iron	mg/kg	20	20	100%	16,100	7,390	12,409	2,596	17,601
Lead	mg/kg	20	20	100%	53.3	8.60	33.5	10.5	54.6
Lithium	mg/kg	20	20	100%	11.6	4.80	7.66	1.89	11.4
Magnesium	mg/kg	20	20	100%	2,800	1,310	1,909	463	2,834
Manganese	mg/kg	20	20	100%	357	129	237	63.9	365
Mercury	mg/kg	20	8	40%	0.120	0.090	0.072	0.031	0.133
Molybdenum	mg/kg	20					0.573	0.184	0.941
Nickel	mg/kg	20	20	100%	14.0	3.80	9.60	2.59	14.8
Nitrate	mg/kg	20	20	100%	7.00	2.00	4.00	1.69	7.37
Plutonium-239/240	pCi/g	50	50	100%	0.350	0.017	0.045	0.047	0.066/0.138[a]
Potassium	mg/kg	20	20	100%	2,830	1,110	2,055	449	2,952
Radium-226	pCi/g	20	20	100%	0.870	0.100	0.620	0.156	0.932
Radium-228	pCi/g	20	20	100%	2.30	0.200	1.35	0.480	2.31
Selenium	mg/kg	20	12	60%	1.40	0.680	0.628	0.305	1.24
Silica	mg/kg	20	20	100%	1,650	934	1,385	178	1,741
Silver	mg/kg	20					0.207	0.007	0.221
Sodium	mg/kg	20	20	100%	105	43.8	63.6	15.7	95.0
Strontium	mg/kg	20	20	100%	45.2	9.60	28.4	10.2	48.8

Analyte	Unit	Number of Samples	Number of Detects	Percent Detected	Maximum Concentration Detected	Minimum Concentration Detected	Mean Concentration	Standard Deviation	Mean+2StDev
Strontium-89/90	pCi/g	50	50	100%	0.610	0.063	0.251	0.128	0.508
Thallium	mg/kg	14					0.414	0.015	0.443
Tin	mg/kg	20					2.06	0.410	2.88
Uranium-233/234	pCi/g	20	20	100%	3.10	0.660	1.10	0.578	2.25
Uranium-235	pCi/g	20	20	100%	0.110	0.033	0.054	0.020	0.095
Uranium-238	pCi/g	20	20	100%	2.60	0.740	1.09	0.456	2.00
Vanadium	mg/kg	20	20	100%	45.8	10.8	27.7	7.68	43.1
Zinc	mg/kg	20	20	100%	75.9	21.1	49.8	12.2	74.2

[a]The plutonium-239/240 calculated background mean + 2StDev. Is 0.138 pCi/g. However, for the purpose of the nature and extent of soil contamination, it is agreed to continue using the approved 1995 DOE Geochemical Characterizatoin Report plutonium-239/240 background mean + 2 StDev. Of 0.066 pCi/g.

Table 2 Sitewide Subsurface Soil Background Data Summary

Analyte	Unit	Number of Samples	Number of Detects	Percent Detected	Maximum Concentration Detected	Minimum Concentration Detected	Mean Concentration	Standard Deviation	Mean+2StDev
Aluminum	mg/kg	44	44	100%	40,700	4,300	14,160	8,116	30,392
Americium-241	pCi/g	13	13	100%	0.010	-0.010	-0.002	0.006	0.010
Antimony	mg/kg	28	2	7%	8.20	2.90	4.21	2.78	9.78
Arsenic	mg/kg	45	42	93%	41.8	1.70	5.48	6.02	17.5
Barium	mg/kg	45	40	89%	491	36.8	114	88.6	291
Beryllium	mg/kg	45	43	96%	22.4	1.00	5.76	5.01	15.8
Cadmium	mg/kg	37	2	5%	1.50	1.40	0.569	0.254	1.08
Calcium	mg/kg	45	45	100%	157,000	1,130	10,426	23,141	56,708
Cesium	mg/kg	43	1	2%	274	274	118	27.2	172
Cesium-137	pCi/g	45	45	100%	0.200	0.00E+00	0.027	0.058	0.143
Chromium	mg/kg	45	45	100%	69.6	5.80	18.4	11.9	42.2
Cobalt	mg/kg	45	12	27%	20.5	4.50	5.99	4.71	15.4
Copper	mg/kg	45	43	96%	31.6	2.20	11.6	6.09	23.8
Gross Alpha	pCi/g	45	45	100%	46.0	3.00	26.2	8.95	44.1
Gross Beta	pCi/g	45	45	100%	41.0	6.00	24.0	7.00	38.0
Iron	mg/kg	45	45	100%	35,900	5,750	15,046	6,707	28,459
Lead	mg/kg	45	45	100%	25.8	4.20	13.9	6.31	26.5

Analyte	Unit	Number of Samples	Number of Detects	Percent Detected	Maximum Concentration Detected	Minimum Concentration Detected	Mean Concentration	Standard Deviation	Mean+2StDev
Lithium	mg/kg	45	25	56%	31.3	3.30	9.83	5.32	20.5
Magnesium	mg/kg	45	42	93%	5,580	1,290	2,803	1,362	5,526
Manganese	mg/kg	45	45	100%	747	16.0	171	158	487
Mercury	mg/kg	41	12	29%	0.640	0.190	0.155	0.166	0.488
Molybdenum	mg/kg	45	30	67%	41.0	3.50	13.5	7.80	29.1
Nickel	mg/kg	44	44	100%	54.2	4.30	20.9	11.1	43.0
Nitrate	mg/kg	44	27	61%	7.08	1.10	1.57	1.38	4.33
Plutonium-239/240	pCi/g	45	45	100%	0.030	-0.002	0.006	0.008	0.022
Potassium	mg/kg	44	29	66%	3,830	698	1,351	938	3,227
Radium-226	pCi/g	31	31	100%	1.30	0.400	0.784	0.279	1.34
Radium-228	pCi/g	31	31	100%	2.10	1.00	1.45	0.320	2.09
Selenium	mg/kg	38					0.592	0.543	1.68
Silver	mg/kg	37	18	49%	40.9	1.50	6.39	10.1	26.6
Sodium	mg/kg	45	10	22%	3,680	194	349	551	1,450
Strontium	mg/kg	45	27	60%	226	25.1	50.3	42.6	136
Strontium-89/90	pCi/g	45	45	100%	0.800	-0.600	-0.038	0.304	0.570
Sulfide	mg/kg	41	16	39%	7.20	2.00	2.20	1.48	5.16
Thallium	mg/kg	35	2	6%	0.400	0.220	0.476	0.472	1.42
Tin	mg/kg	41	15	37%	441	25.7	86.0	134	354
Uranium-233/234	pCi/g	45	45	100%	3.40	0.200	0.829	0.625	2.08
Uranium-235	pCi/g	45	45	100%	0.300	0.00E+00	0.036	0.063	0.162
Uranium-238	pCi/g	45	45	100%	3.20	0.200	0.792	0.491	1.77
Vanadium	mg/kg	45	44	98%	70.0	11.4	33.8	14.8	63.3
Zinc	mg/kg	44	44	100%	79.8	0.520	36.2	21.0	78.3

Table 3 Process Knowledge Evaluation

Analyte	Basis for Eliminating as a Surface Soil AOI
Cobalt	A review of possible contaminants of concern at RFETS conducted by ChemRisk Corp. for CDPHE (CDH 1991, 1992) did not identify any buildings where cobalt was reported used in any processes and showed only small quantities of cobalt in inventory with the exception of cobalt oxide reported in 1974 at 677 kilograms. In 1988 the inventory was reported as less than 1 kg. Based on release scenarios developed by ChemRisk Corp., cobalt was not identified as a material of concern (CDH 1992). While there is extensive process information related to uses of many chemicals on site, there is no reported process information regarding the use of cobalt, indicating there was no specific or widespread use of cobalt. There is no record of spills involving cobalt within buildings on-site, based on a review of RLCRs and PDSRs. The IABZSAP (DOE 2004b) also does not identify any under building contamination areas that required a RFCA accelerated action. No cobalt soil contamination has been identified in Closeout Reports that required a RFCA accelerated action. Cobalt was detected at a concentration greater than the WRW PRG in one location within the IA OU (frequency of detection greater than the WRW PRG is 0.04 percent or 1 out of 2,638 samples). Cobalt also occurs naturally in the environment in air, water, soil, rocks, plants and animals.
Iron	Iron was not used in the manufacturing or production processes at RFETS (K-H 2005). Certain components used within the manufacturing processes may have contained iron, such as graphite crucibles (Buildings 444, 445, 450, and 455). These buildings involved radiological operations and included extensive HEPA filtration systems. A review of possible contaminants of concern at RFETS conducted by ChemRisk Corp. for CDPHE (CDH 1991, 1992) did not identify iron as a metal or any chemical compound used at RFETS. Iron was not identified above a RFCA AL requiring an accelerated action based on SAPs, SAP Addenda, or Closeout Reports for IHSSs. The frequency of iron detection greater than the WRW PRG is 0.68 percent (18 out of 2,638 samples). Locations are both within the IA and BZ OUs. Iron is also a ubiquitous naturally occurring constituent in soil.
Manganese	A review of possible contaminants of concern at RFETS conducted by ChemRisk Corp. for CDPHE (CDH 1991, 1992) did not identify any buildings where manganese was reported used in any processes and showed only small quantities of manganese in inventory with the exception of manganous sulfate reported in 1974 at 2,560 kilograms. In 1988 the inventory was reported as 0.8 kg. Based on release scenarios developed by ChemRisk Corp., manganese was not identified as a material of concern (CDH 1992). While there is extensive process information related to uses of many chemicals on site, there is no reported process information regarding the use of manganese, indicating there was no specific or widespread use of manganese. The IABZSAP (DOE 2004b) also does not identify any under building contamination areas that required a RFCA accelerated action. No manganese soil contamination has been identified in Closeout Reports that required a RFCA accelerated action. The frequency of manganese detection greater than the WRW PRG is 6.99 percent (184 out of 2,633 samples). Manganese is also a ubiquitous naturally occurring constituent in soil.
Mercury	Mercury was not used in the manufacturing or production processes at RFETS (K-H 2005). Mercury was found in instruments such as barometers, manometers, thermometers, plant machinery, mercury switches and experimental apparatus. Mercury was collected from Plant sources and purified by distillation in Building 881. Mercury has not been found associated with UBC sites except the Building 443 subfloor piping (it did not occur outside the pipes) and a report of a broken mercury gauge in Building 447 steam plant. Mercury was identified as a spill within Building 774; however, it was not identified as a contaminant of concern for this building because it was expected that this spill was properly remediated. Mercury was identified in the ChemRisk process, however, it was not carried forward as a material of concern. Mercury was not identified above a RFCA AL requiring an accelerated action based on SAPs, SAP Addenda, or Closeout Reports for IHSSs. Mercury was detected at concentrations greater than the WRW PRG in one location within the IA OU (frequency of detection greater than the WRW PRG is 0.04 percent or 1 out of 2,554 samples). Mercury occurs in trace amounts in crustal rocks, but is highly enriched in shales (DOE 1995).
Cesium-137	A review of possible contaminants of concern at RFETS conducted by ChemRisk Corp. for CDPHE (CDH 1991, 1992) identified cesium-137 as a radionuclide used for research, analytical and calibration activities (for example, sealed and plated sources) (K-H 2005). Based on limited quantities, cesium-137 was not carried forward as a material of concern. The ChemRisk Task 2 Report determined that detection of cesium-

Analyte	Basis for Eliminating as a Surface Soil AOI
	137 (along with other radionuclides) in environmental samples from 1970 through 1981 was consistent with the presence of fission products from worldwide fallout and the levels were typical of other sites sampled in the western United States. In addition, the CESC conducted an off-site soil sampling study in 1993 and 1994. Background levels of cesium-137 were detected in some soil samples; however this report concluded that "no evidence has been found to suggest that cesium-137 or strontium-90 were released during the operational period of the Rocky Flats Plant". The background value for cesium-137 (1.7 pCi/g) is greater than the WRW PRG (0.2 pCi/g). The frequency of detection greater than the WRW PRG and background for cesium-137 is 3.3 percent (12 out of 364 samples). Cesium-137 is distributed in regional soils as a result of fallout from nuclear-weapons explosions (DOE 1995).
Radium-228	The ChemRisk Reports did not identify radium-228 as a radionuclide used at the Rocky Flats Plant (K-H 2005). Radium-228 is in the thorium-232 decay chain and thorium-232 was used in metals fabrication in Building 881. The information in the ChemRisk reports concluded that thorium-232 had not been a significant component of airborne effluent from the Rocky Flats Plant and it was not used in significant quantities relative to other production radionuclides. Thorium operations were insignificant relative to the primary production activities and little data exist to support the quantification of release. The frequency of detection greater than the WRW PRG is 11.63 percent (20 out of 172 samples). Radium-228 occurs naturally in soil due to the radioactive decay of thorium-232 (DOE 1995). The half-life of radium-228 is approximately 6.7 years (DOE 1995). This rationale is also the basis for eliminating radium-228 as a subsurface soil AOI.

Table 4 Surface Soil Summary Statistics

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Surface Soil AOIs	Number of Results ≥10xPRG	Percent ≥10xPRG	≥10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean +2SD	Number of Results >Background Mean +2SD	Percent Results >Background Mean +2SD	PRG	Number of Results ≥PRG	Percent ≥PRG	Eliminated by Process Knowledge				
Metal	Barium	7440-39-3	mg/kg	2640	2638	99.92%	0.64	99.9	1500		67.4	141	456	17.27%	2,872		0.00%				0.00%	
Metal	Beryllium	7440-41-7	mg/kg	2639	2154	81.62%	0.071	0.658	35.1		0.979	0.964	398	15.08%	100		0.00%				0.00%	
Metal	Boron	7440-42-8	mg/kg	1301	1118	85.93%	0.35	3.86	28		2.79			0.00%	9,477		0.00%				0.00%	
Metal	Chromium VI		mg/kg	18	1	5.56%	0.85	0.416	0.85		0.166			0.00%	28.4		0.00%				0.00%	
Metal	Copper	7440-50-8	mg/kg	2637	2590	98.22%	1.7	22.0	1860		54.4	18.1	742	28.14%	4,443		0.00%				0.00%	
Metal	Lead	7439-92-1	mg/kg	2634	2634	100.00%	0.87	25.1	814		39.1	54.6	159	6.04%	1000*		0.00%				0.00%	
Metal	Lithium	7439-93-2	mg/kg	2443	2311	94.60%	0.99	8.90	50		4.30	11.4	537	21.98%	2,222		0.00%				0.00%	
Metal	Molybdenum	7439-98-7	mg/kg	2433	1140	46.86%	0.14	0.983	19.1		1.06	0.941	350	14.39%	555		0.00%				0.00%	
Metal	Nickel	7440-02-0	mg/kg	2636	2568	97.42%	1.9	12.3	280		10.7	14.8	672	25.49%	2,222		0.00%				0.00%	
Metal	Selenium	7782-49-2	mg/kg	2604	353	13.56%	0.22	0.378	20.4		0.458	1.24	22	0.84%	555		0.00%				0.00%	
Metal	Silver	7440-22-4	mg/kg	2604	741	28.46%	0.058	1.02	364		8.23	0.221	560	21.51%	555		0.00%				0.00%	
Metal	Strontium	7440-24-6	mg/kg	2435	2434	99.96%	2.4	32.7	413		30.3	48.8	414	17.00%	66,652		0.00%				0.00%	
Metal	Thallium	7440-28-0	mg/kg	2612	367	14.05%	0.1	0.422	5.8		0.425	0.443	246	9.42%	7.78		0.00%				0.00%	
Metal	Tin	7440-31-5	mg/kg	2435	246	10.10%	0.289	3.45	161		8.12	2.88	144	5.91%	66,652		0.00%				0.00%	
Metal	Titanium	7440-32-6	mg/kg	1301	1301	100.00%	28	257	1730		171			0.00%	169,568		0.00%				0.00%	
Metal	Zinc	7440-66-6	mg/kg	2638	2633	99.81%	4.2	76.3	11900		258	74.2	503	19.07%	33,326		0.00%				0.00%	
Wet Chem	Ammonia	7664-41-7	mg/kg	32	25	78.13%	0.335	1.87	4.81		1.27	5.83		0.00%	910,997		0.00%				0.00%	
Wet Chem	Cyanide	57-12-5	mg/kg	247	6	2.43%	0.17	0.494	0.29		0.474			0.00%	2,222		0.00%				0.00%	
Wet Chem	Fluoride	16984-48-8	mg/kg	9	9	100.00%	1.87	2.42	3.61		0.497			0.00%	6,665		0.00%				0.00%	
Wet Chem	Nitrate / Nitrite	ConID 184	mg/kg	456	380	83.33%	0.216	13.4	765		59.4	7.37	114	25.00%	177,739		0.00%				0.00%	
Wet Chem	Nitrite	ConID 187	mg/kg	11	10	90.91%	1.2	1.69	2	B	0.405			0.00%	11,109		0.00%				0.00%	
Dioxins/Furans	123478-HxCDD	39227-28-6	µg/kg	22	14	63.64%	0.00022	8.88E-04	0.0073	B	0.002			0.00%	0.483		0.00%				0.00%	
Dioxins/Furans	123678-HxCDD	57653-85-7	µg/kg	22	19	86.36%	0.00039	0.002	0.012	B	0.003			0.00%	0.483		0.00%				0.00%	
Dioxins/Furans	123789-HxCDD	19408-74-3	µg/kg	22	18	81.82%	0.00022	0.002	0.021	B	0.004			0.00%	0.483		0.00%				0.00%	
Dioxins/Furans	2378-TCDD	1746-01-6	µg/kg	22	15	68.18%	0.0000259	0.002	0.0068		0.002			0.00%	0.025		0.00%				0.00%	
Explosive	HMX	2691-41-0	µg/kg	5	1	20.00%	230	146	230	J	47.0			0.00%	4.01E+06		0.00%				0.00%	
Herbicide	2,4,5-TP (Silvex)	93-72-1	µg/kg	12	0	0.00%	14.5	16.5	100		15.7			0.00%	169,369		0.00%				0.00%	
Herbicide	2,4-D	94-75-7	µg/kg	12	0	0.00%	83	44.3	100		2.84			0.00%	801,435		0.00%				0.00%	
Herbicide	2,4-DB	94-82-6	µg/kg	9	0	0.00%	83	44.3	100		3.32			0.00%	641,148		0.00%				0.00%	
Herbicide	4-Nitrophenol	100-02-7	µg/kg	1184	2	0.17%	53	1,262	320	J	1,086			0.00%	641,148		0.00%				0.00%	
Herbicide	Dalapon	75-99-0	µg/kg	9	0	0.00%	42	27.8	100		12.6			0.00%	2.40E+06		0.00%				0.00%	
Herbicide	Dicamba	1918-00-9	µg/kg	9	5	55.56%	2.3	39.5	150		44.8			0.00%	2.40E+06		0.00%				0.00%	
Herbicide	Dinoseb	88-85-7	µg/kg	9	0	0.00%	12	16.1	100		19.2			0.00%	80,144		0.00%				0.00%	
Herbicide	MCPA	94-74-6	µg/kg	9	1	11.11%	1100	9,000	1100	J	15,411			0.00%	40,072		0.00%				0.00%	
Herbicide	MCPP	93-65-2	µg/kg	9	0	0.00%	8300	14,433	100000		20,165			0.00%	80,144		0.00%				0.00%	
PCB	PCB-1016	12674-11-2	µg/kg	802	6	0.75%	13	53.8	95		138			0.00%	1,349		0.00%				0.00%	
PCB	PCB-1221	11104-28-2	µg/kg	852	0	0.00%	33	53.9	4500		134			0.00%	1,349		0.00%				0.00%	
PCB	PCB-1232	11141-16-5	µg/kg	852	0	0.00%	33	54.5	4500		135			0.00%	1,349		0.00%				0.00%	
PCB	PCB-1242	53469-21-9	µg/kg	852	2	0.23%	23	54.9	350		135			0.00%	1,349		0.00%				0.00%	
PCB	PCB-1248	12672-29-6	µg/kg	852	6	0.70%	17	56.0	840		138			0.00%	1,349		0.00%				0.00%	
Pesticide	4,4'-DDD	72-54-8	µg/kg	471	2	0.42%	3.5	10.1	10	J	8.96			0.00%	15,528		0.00%				0.00%	
Pesticide	4,4'-DDE	72-55-9	µg/kg	471	7	1.49%	0.6	10.3	7.2	J	9.09			0.00%	10,961		0.00%				0.00%	
Pesticide	4,4'-DDT	50-29-3	µg/kg	471	4	0.85%	9.1	10.3	26		9.04			0.00%	10,927		0.00%				0.00%	
Pesticide	Aldrin	309-00-2	µg/kg	471	4	0.85%	0.59	5.35	17		4.78			0.00%	176		0.00%				0.00%	
Pesticide	alpha-BHC	319-84-6	µg/kg	471	1	0.21%	7.9	5.08	7.9	J	3.84			0.00%	570		0.00%				0.00%	
Pesticide	alpha-Chlordane	5103-71-9	µg/kg	435	0	0.00%	1.8	51.1	950		43.4			0.00%	10,261		0.00%				0.00%	
Pesticide	beta-BHC	319-85-7	µg/kg	470	3	0.64%	11	5.14	20		3.93			0.00%	1,995		0.00%				0.00%	
Pesticide	beta-Chlordane	5103-74-2	µg/kg	413	1	0.24%	2.6	50.9	2.6	P	43.4			0.00%	10,261		0.00%				0.00%	
Pesticide	Chlordane		µg/kg	35	0	0.00%	18	46.8	220		38.4			0.00%	10,261		0.00%				0.00%	
Pesticide	Chlorpyriphos	2921-88-2	µg/kg	7	0	0.00%	8.6	10.2	89		15.1			0.00%	240,431		0.00%				0.00%	
Pesticide	delta-BHC	319-86-8	µg/kg	471	2	0.42%	10	5.14	23		3.93			0.00%	570		0.00%				0.00%	
Pesticide	Demeton	8065-48-3	µg/kg	7	0	0.00%	8.6	10.2	89		15.1			0.00%	3,206		0.00%				0.00%	
Pesticide	Dieldrin	60-57-1	µg/kg	471	11	2.34%	1.8	10.8	92	P	10.4			0.00%	187		0.00%				0.00%	

*The PRG value for lead is not calculated, but rather is taken from EPA's "Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities (1994)".

As, Cs-134, Cs-137, and Ra-228 adjusted for Surface Background Mean+2SD

Table 4 Surface Soil Summary Statistics

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Surface Soil AOIs	Number of Results≥10xPRG	Percent ≥10xPRG	≥10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean +2SD	Number of Results >Background Mean +2SD	Percent Results >Background Mean +2SD	PRG	Number of Results ≥PRG	Percent ≥PRG	Eliminated by Process Knowledge				
Pesticide	Endosulfan I	959-98-8	µg/kg	471	2	0.42%	3.9	5.08	7.4	J	3.83			0.00%	480,861		0.00%				0.00%	
Pesticide	Endosulfan II	33213-65-9	µg/kg	464	3	0.65%	0.7	9.83	9.9	J	7.32			0.00%	480,861		0.00%				0.00%	
Pesticide	Endosulfan sulfate	1031-07-8	µg/kg	471	3	0.64%	5.5	10.2	24		8.97			0.00%	480,861		0.00%				0.00%	
Pesticide	Endrin	72-20-8	µg/kg	471	6	1.27%	2.4	11.2	17	J	14.6			0.00%	24,043		0.00%				0.00%	
Pesticide	Endrin aldehyde	7421-93-4	µg/kg	68	2	2.94%	8.7	3.64	9.2	J	3.54			0.00%	24,043		0.00%				0.00%	
Pesticide	Endrin ketone	53494-70-5	µg/kg	439	1	0.23%	36	10.7	36		9.13			0.00%	33,326		0.00%				0.00%	
Pesticide	gamma-BHC (Lindane)	58-89-9	µg/kg	471	1	0.21%	8.3	5.07	8.3	J	3.84			0.00%	2,771		0.00%				0.00%	
Pesticide	gamma-Chlordane	12789-03-6	µg/kg	23	0	0.00%	2	55.1	260		43.8			0.00%	10,261		0.00%				0.00%	
Pesticide	Heptachlor	76-44-8	µg/kg	471	0	0.00%	1.8	5.09	95		3.84			0.00%	665		0.00%				0.00%	
Pesticide	Heptachlor epoxide	1024-57-3	µg/kg	470	3	0.64%	7.2	6.15	23		6.47			0.00%	329		0.00%				0.00%	
Pesticide	Hexachlorocyclopentadiene	77-47-4	µg/kg	1222	1	0.08%	1800	308	1800	J	218			0.00%	380,452		0.00%				0.00%	
Pesticide	Methoxychlor	72-43-5	µg/kg	471	8	1.70%	0.28	50.4	450		49.2			0.00%	400,718		0.00%				0.00%	
Pesticide	Toxaphene	8001-35-2	µg/kg	471	0	0.00%	86	138	2200		165			0.00%	2,720		0.00%				0.00%	
SVOC	1,2,4-Trichlorobenzene	120-82-1	µg/kg	1578	8	0.51%	0.56	163	150	J	200			0.00%	151,360		0.00%				0.00%	
SVOC	2,4,5-Trichlorophenol	95-95-4	µg/kg	1195	1	0.08%	1100	598	1100		666			0.00%	8.01E+06		0.00%				0.00%	
SVOC	2,4,6-Trichlorophenol	88-06-2	µg/kg	1195	1	0.08%	950	261	950		217			0.00%	272,055		0.00%				0.00%	
SVOC	2,4,6-Trinitrotoluene	118-96-7	µg/kg	8	1	12.50%	56	69.5	56	J	62.0			0.00%	40,072		0.00%				0.00%	
SVOC	2,4-Dichlorophenol	120-83-2	µg/kg	1195	0	0.00%	330	260	7000		215			0.00%	240,431		0.00%				0.00%	
SVOC	2,4-Dimethylphenol	105-67-9	µg/kg	1195	4	0.33%	47	260	150	J	215			0.00%	1.60E+06		0.00%				0.00%	
SVOC	2,4-Dinitrophenol	51-28-5	µg/kg	1188	0	0.00%	850	1,264	35000		1,083			0.00%	160,287		0.00%				0.00%	
SVOC	2,4-Dinitrotoluene	121-14-2	µg/kg	1246	0	0.00%	250	262	7000		212			0.00%	160,287		0.00%				0.00%	
SVOC	2,6-Dinitrotoluene	606-20-2	µg/kg	1246	0	0.00%	250	262	7000		212			0.00%	80,144		0.00%				0.00%	
SVOC	2-Chloronaphthalene	91-58-7	µg/kg	1241	0	0.00%	330	263	7000		213			0.00%	6.41E+06		0.00%				0.00%	
SVOC	2-Chlorophenol	95-57-8	µg/kg	1195	0	0.00%	330	260	7000		215			0.00%	555,435		0.00%				0.00%	
SVOC	2-Methylnaphthalene	91-57-6	µg/kg	1237	93	7.52%	34	272	19000		576			0.00%	320,574		0.00%				0.00%	
SVOC	2-Methylphenol	95-48-7	µg/kg	1195	1	0.08%	74	260	74	J	215			0.00%	4.01E+06		0.00%				0.00%	
SVOC	2-Nitroaniline	88-74-4	µg/kg	1238	0	0.00%	370	1,272	35000		1,067			0.00%	192,137		0.00%				0.00%	
SVOC	3,3'-Dichlorobenzidine	91-94-1	µg/kg	1204	0	0.00%	340	600	14000		445			0.00%	6,667		0.00%				0.00%	
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	µg/kg	1191	1	0.08%	390	1,262	390	J	1,082			0.00%	8,014		0.00%				0.00%	
SVOC	4-Chloroaniline	106-47-8	µg/kg	1231	0	0.00%	330	380	14000		419			0.00%	320,574		0.00%				0.00%	
SVOC	4-Methylphenol	106-44-5	µg/kg	1195	6	0.50%	64	260	270	J	215			0.00%	400,718		0.00%				0.00%	
SVOC	4-Nitroaniline	100-01-6	µg/kg	1232	4	0.32%	62	1,269	820	J	1,071			0.00%	207,917		0.00%				0.00%	
SVOC	4-Nitrotoluene	99-99-0	µg/kg	5	0	0.00%	250	125	250		0.00E+00			0.00%	244,608		0.00%				0.00%	
SVOC	Acenaphthene	83-32-9	µg/kg	1253	286	22.83%	21	254	11000		456			0.00%	4.44E+06		0.00%				0.00%	
SVOC	Anthracene	120-12-7	µg/kg	1259	326	25.89%	31	271	9000	D	493			0.00%	2.22E+07		0.00%				0.00%	
SVOC	Benzo(k)fluoranthene	207-08-9	µg/kg	1232	440	35.71%	23	356	9300	D	574			0.00%	37,927		0.00%				0.00%	
SVOC	Benzoic Acid	65-85-0	µg/kg	1149	127	11.05%	39	1,211	1100	J	1,139			0.00%	3.21E+08		0.00%				0.00%	
SVOC	Benzyl Alcohol	100-51-6	µg/kg	1128	8	0.71%	140	390	2800		430			0.00%	2.40E+07		0.00%				0.00%	
SVOC	bis(2-Chloroethyl) ether	111-44-4	µg/kg	1236	0	0.00%	330	263	7000		213			0.00%	3,767		0.00%				0.00%	
SVOC	bis(2-Chloroisopropyl) ether	108-60-1	µg/kg	1221	0	0.00%	330	262	7000		214			0.00%	59,301		0.00%				0.00%	
SVOC	bis(2-ethylhexyl)phthalate	117-81-7	µg/kg	1241	376	30.30%	29	404	75000		2,253			0.00%	213,750		0.00%				0.00%	
SVOC	Butylbenzylphthalate	85-68-7	µg/kg	1240	123	9.92%	35	284	7100		327			0.00%	1.60E+07		0.00%				0.00%	
SVOC	Carbazole	86-74-8	µg/kg	40	22	55.00%	39	286	3400		521			0.00%	150,001		0.00%				0.00%	
SVOC	Chrysene	218-01-9	µg/kg	1254	647	51.59%	36	429	16000	D	930			0.00%	379,269		0.00%				0.00%	
SVOC	Dibenzofuran	132-64-9	µg/kg	1241	143	11.52%	36	265	4600		278			0.00%	222,174		0.00%				0.00%	
SVOC	Diethylphthalate	84-66-2	µg/kg	1238	8	0.65%	33	304	420	J	214			0.00%	6.41E+07		0.00%				0.00%	
SVOC	Dimethoate	60-51-5	µg/kg	7	0	0.00%	18	20.6	180		30.6			0.00%	16,029		0.00%				0.00%	
SVOC	Dimethylphthalate	131-11-3	µg/kg	1241	18	1.45%	69	261	460	J	213			0.00%	8.01E+08		0.00%				0.00%	
SVOC	Di-n-butylphthalate	84-74-2	µg/kg	1241	99	7.98%	35	263	10000	E	352			0.00%	8.01E+06		0.00%				0.00%	
SVOC	Di-n-octylphthalate	117-84-0	µg/kg	1239	48	3.87%	38	281	11000		494			0.00%	3.21E+06		0.00%				0.00%	
SVOC	Fluoranthene	206-44-0	µg/kg	1249	731	58.53%	37	775	34000	D	2,023			0.00%	2.96E+06		0.00%				0.00%	
SVOC	Fluorene	86-73-7	µg/kg	1258	243	19.32%	27	277	6700	DJ	365			0.00%	3.21E+06		0.00%				0.00%	
SVOC	Hexachlorobenzene	118-74-1	µg/kg	1238	4	0.32%	110	262	380	J	213			0.00%	1,870		0.00%				0.00%	
SVOC	Hexachlorobutadiene	87-68-3	µg/kg	1579	1	0.06%	2.2	163	2.2	J	200			0.00%	22,217		0.00%				0.00%	

As, Cs-134, Cs-137, and Ra-228 adjusted for Surface Background Mean+2SD

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Table 4 Surface Soil Summary Statistics

6/28/2005

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Surface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean +2SD	Number of Results >Background Mean +2SD	Percent Results >Background Mean +2SD	PRG	Number of Results ≥PRG	Percent ≥PRG	Eliminated by Process Knowledge				
SVOC	Isophorone	78-59-1	µg/kg	1241	6	0.48%	96	263	850		213			0.00%	3.16E+06		0.00%				0.00%	
SVOC	Naphthalene	91-20-3	µg/kg	1596	234	14.66%	0.5	191	8900		412			0.00%	1.40E+06		0.00%				0.00%	
SVOC	Nitrobenzene	98-95-3	µg/kg	1232	0	0.00%	250	263	7000		213			0.00%	43,246		0.00%				0.00%	
SVOC	N-Nitroso-di-n-propylamine	621-64-7	µg/kg	1236	1	0.08%	400	263	400		213			0.00%	429		0.00%				0.00%	
SVOC	N-nitrosodiphenylamine	86-30-6	µg/kg	1241	0	0.00%	330	263	7000		212			0.00%	612,250		0.00%				0.00%	
SVOC	Parathion	56-38-2	µg/kg	7	0	0.00%	8.6	10.2	89		15.1			0.00%	480,861		0.00%				0.00%	
SVOC	Phenol	108-95-2	µg/kg	1195	6	0.50%	33	260	130	J	219			0.00%	2.40E+07		0.00%				0.00%	
SVOC	Pyrene	129-00-0	µg/kg	1256	724	57.64%	35	770	49000	E	2,220			0.00%	2.22E+06		0.00%				0.00%	
VOC	1,1,1,2-Tetrachloroethane	630-20-6	µg/kg	533	0	0.00%	0.502	1.01	131		2.94			0.00%	91,018		0.00%				0.00%	
VOC	1,1,1-Trichloroethane	71-55-6	µg/kg	650	13	2.00%	1.1	4.11	1240	JE	50.5			0.00%	9.18E+06		0.00%				0.00%	
VOC	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	649	1	0.15%	1.39	2.02	1.39	JB	13.5			0.00%	10,483		0.00%				0.00%	
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	µg/kg	533	1	0.19%	1.83	1.21	1.83	J	2.70			0.00%	2.38E+09		0.00%				0.00%	
VOC	1,1,2-Trichloroethane	79-00-5	µg/kg	650	0	0.00%	0.502	1.99	680		13.5			0.00%	28,022		0.00%				0.00%	
VOC	1,1-Dichloroethane	75-34-3	µg/kg	650	0	0.00%	0.512	1.97	680		13.5			0.00%	2.72E+06		0.00%				0.00%	
VOC	1,1-Dichloroethene	75-35-4	µg/kg	650	1	0.15%	7.9	2.18	7.9		13.5			0.00%	17,366		0.00%				0.00%	
VOC	1,2,3-Trichloropropane	96-18-4	µg/kg	533	1	0.19%	1.47	0.998	1.47	JB	3.06			0.00%	2,079		0.00%				0.00%	
VOC	1,2-Dibromo-3-chloropropane	96-12-8	µg/kg	532	0	0.00%	1.368	2.30	589		12.8			0.00%	2,968		0.00%				0.00%	
VOC	1,2-Dibromoethane	106-93-4	µg/kg	533	0	0.00%	0.502	0.966	138		3.09			0.00%	35.1		0.00%				0.00%	
VOC	1,2-Dichlorobenzene	95-50-1	µg/kg	1356	0	0.00%	0.502	125	6900		149			0.00%	2.89E+06		0.00%				0.00%	
VOC	1,2-Dichloroethane	107-06-2	µg/kg	646	0	0.00%	0.522	2.03	680		13.5			0.00%	13,270		0.00%				0.00%	
VOC	1,2-Dichloroethene	540-59-0	µg/kg	102	1	0.98%	16	7.92	16		33.3			0.00%	999,783		0.00%				0.00%	
VOC	1,2-Dichloropropane	78-87-5	µg/kg	650	2	0.31%	18	2.19	140		14.5			0.00%	38,427		0.00%				0.00%	
VOC	1,3-Dichlorobenzene	541-73-1	µg/kg	1578	0	0.00%	0.505	163	7000		200			0.00%	3.33E+06		0.00%				0.00%	
VOC	1,4-Dichlorobenzene	106-46-7	µg/kg	1356	9	0.66%	0.45	125	110	J	149			0.00%	91,315		0.00%				0.00%	
VOC	2-Butanone	78-93-3	µg/kg	648	16	2.47%	3	11.9	155		38.6			0.00%	4.64E+07		0.00%				0.00%	
VOC	4-Methyl-2-pentanone	108-10-1	µg/kg	647	16	2.47%	4	10.6	73	B	64.7			0.00%	8.32E+07		0.00%				0.00%	
VOC	Acetone	67-64-1	µg/kg	649	127	19.57%	1.7	26.3	1280		93.6			0.00%	1.00E+08		0.00%				0.00%	
VOC	Benzene	71-43-2	µg/kg	650	6	0.92%	1	1.95	11	J	13.5			0.00%	23,563		0.00%				0.00%	
VOC	Bromodichloromethane	75-27-4	µg/kg	650	0	0.00%	0.502	1.91	680		13.5			0.00%	67,070		0.00%				0.00%	
VOC	Bromoform	75-25-2	µg/kg	650	0	0.00%	0.525	2.10	680		13.7			0.00%	419,858		0.00%				0.00%	
VOC	Bromomethane	74-83-9	µg/kg	646	0	0.00%	0.972	2.36	153		4.34			0.00%	20,959		0.00%				0.00%	
VOC	Carbon Disulfide	75-15-0	µg/kg	650	1	0.15%	4	2.51	4	J	13.5			0.00%	1.64E+06		0.00%				0.00%	
VOC	Carbon Tetrachloride	56-23-5	µg/kg	650	22	3.38%	0.34	2.69	190		16.1			0.00%	8,446		0.00%				0.00%	
VOC	Chlorobenzene	108-90-7	µg/kg	650	2	0.31%	2	2.04	2.03	JB	13.6			0.00%	666,523		0.00%				0.00%	
VOC	Chloroethane	75-00-3	µg/kg	647	0	0.00%	0.862	3.78	1400		27.7			0.00%	1.43E+06		0.00%				0.00%	
VOC	Chloroform	67-66-3	µg/kg	650	8	1.23%	1.3	1.96	7	J	13.5			0.00%	7,850		0.00%				0.00%	
VOC	Chloromethane	74-87-3	µg/kg	650	3	0.46%	1.5	3.27	1.7	J	27.7			0.00%	115,077		0.00%				0.00%	
VOC	cis-1,3-Dichloropropene	10061-01-5	µg/kg	650	0	0.00%	0.502	1.96	680		13.5			0.00%	19,432		0.00%				0.00%	
VOC	Dibromochloromethane	124-48-1	µg/kg	650	0	0.00%	0.502	1.99	680		13.5			0.00%	49,504		0.00%				0.00%	
VOC	Dichlorodifluoromethane	75-71-8	µg/kg	515	0	0.00%	1.73	2.27	398		8.98			0.00%	229,820		0.00%				0.00%	
VOC	Ethylbenzene	100-41-4	µg/kg	650	50	7.69%	0.5	3.07	173		16.8			0.00%	5.39E+06		0.00%				0.00%	
VOC	Hexachloroethane	67-72-1	µg/kg	1241	0	0.00%	330	263	7000		212			0.00%	111,087		0.00%				0.00%	
VOC	Isopropylbenzene	98-82-8	µg/kg	531	12	2.26%	0.54	1.03	27		2.50			0.00%	32,680		0.00%				0.00%	
VOC	Methylene Chloride	75-09-2	µg/kg	648	79	12.19%	0.79	3.60	45	B	43.3			0.00%	271,792		0.00%				0.00%	
VOC	Styrene	100-42-5	µg/kg	650	1	0.15%	7.8	2.00	7.8	J	13.5			0.00%	1.38E+07		0.00%				0.00%	
VOC	Toluene	108-88-3	µg/kg	650	61	9.38%	0.099	13.1	2960	E	131			0.00%	3.09E+06		0.00%				0.00%	
VOC	trans-1,3-Dichloropropene	10061-02-6	µg/kg	650	0	0.00%	0.502	1.99	680		13.5			0.00%	20,820		0.00%				0.00%	
VOC	Trichlorofluoromethane	75-69-4	µg/kg	533	29	5.44%	0.66	1.32	31.9		2.74			0.00%	1.51E+06		0.00%				0.00%	
VOC	Vinyl acetate	108-05-4	µg/kg	78	0	0.00%	10	20.3	1400		78.5			0.00%	2.65E+06		0.00%				0.00%	
VOC	Vinyl Chloride	75-01-4	µg/kg	650	0	0.00%	0.748	3.56	1400		27.6			0.00%	2,169		0.00%				0.00%	
VOC	Xylene	1330-20-7	µg/kg	650	70	10.77%	0.28	10.3	1200	E	68.4			0.00%	1.06E+06		0.00%				0.00%	
Radionuclide	Cesium-134	13967-70-9	pCi/g	162	99	61.11%	-0.267	0.016	0.15		0.067	0.266		0.00%	0.080		0.00%				0.00%	
Radionuclide	Curium-244	13981-15-2	pCi/g	1	0	0.00%	-0.0029	-0.003	-0.0029					0.00%	8.63		0.00%				0.00%	
Radionuclide	Neptunium-237	13994-20-2	pCi/g	13	13	100.00%	0.0007793	0.009	0.01873		0.007			0.00%	5.43		0.00%				0.00%	

As, Cs-134, Cs-137, and Ra-228 adjusted for Surface Background Mean+2SD

Table 4 Surface Soil Summary Statistics

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Surface Soil AOIs	Number of Results≥10xPRG	Percent ≥10xPRG	≥10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean +2SD	Number of Results >Background Mean +2SD	Percent Results >Background Mean +2SD	PRG	Number of Results ≥PRG	Percent ≥PRG	Eliminated by Process Knowledge				
Radionuclide	Plutonium-238	13981-16-3	pCi/g	84	62	73.81%	-0.00444	0.088	1.53		0.240			0.00%	5.97		0.00%				0.00%	
Radionuclide	Radium-226	13982-63-3	pCi/g	149	146	97.99%	-7.39	0.924	2.078	X	0.773	0.932	78	52.35%	2.69		0.00%				0.00%	
Radionuclide	Strontium-89/90		pCi/g	293	266	90.78%	-0.0472	0.260	2.87		0.284	0.508	36	12.29%	13.2		0.00%				0.00%	
Metal	Cobalt	7440-48-4	mg/kg	2638	2589	98.14%	1.1	6.64	137		5.19	10.9	208	7.88%	122	1	0.04%	Yes			0.00%	
Metal	Cadmium	7440-43-9	mg/kg	2618	943	36.02%	0.06	0.736	270		5.80	1.62	129	4.93%	91.4	1	0.04%	No	Cadmium		0.00%	
Metal	Mercury	7439-97-6	mg/kg	2554	1246	48.79%	0.0014	0.068	48		0.954	0.133	126	4.93%	32.9	1	0.04%	Yes			0.00%	
Metal	Uranium (total)		mg/kg	1293	113	8.74%	0.43	1.79	370		12.7	5.98	24	1.86%	333	1	0.08%	No	Uranium (total)		0.00%	
Metal	Antimony	7440-36-0	mg/kg	2494	496	19.89%	0.27	2.25	348		7.93	0.436	322	12.91%	44.4	2	0.08%	No	Antimony		0.00%	
SVOC	Pentachlorophenol	87-86-5	µg/kg	1195	12	1.00%	39	1,271	39000		1,470			0.00%	17,633	1	0.08%	No	Pentachlorophenol		0.00%	
Radionuclide	Uranium-233/234		pCi/g	1892	1868	98.73%	0.119	1.30	47.4833		3.09	2.25	106	5.60%	25.3	2	0.11%	No	Uranium-233/234		0.00%	
VOC	Trichloroethene	79-01-6	µg/kg	650	35	5.38%	0.17	16.4	8950	E	351			0.00%	1,770	1	0.15%	No	Trichloroethene		0.00%	
Radionuclide	Uranium-235	15117-96-1	pCi/g	1892	1156	61.10%	-0.0431	0.099	2.2385		1.78	0.095	240	12.68%	1.05	3	0.16%	No	Uranium-235		0.00%	
VOC	Tetrachloroethene	127-18-4	µg/kg	650	64	9.85%	0.38	101	33200	E	1,728			0.00%	6,705	2	0.31%	No	Tetrachloroethene		0.00%	
Radionuclide	Uranium-238	7440-61-1	pCi/g	1892	1880	99.37%	0.162	1.60	209.2773		6.15	2.00	165	8.72%	29.3	6	0.32%	No	Uranium-238		0.00%	
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	1234	419	33.95%	24	329	13000	E	584			0.00%	3,793	4	0.32%	No	Indeno(1,2,3-cd)pyrene		0.00%	
Metal	Vanadium	7440-62-2	mg/kg	2638	2637	99.96%	4.4	54.8	43400		882	43.1	303	11.49%	111	12	0.45%	No	Vanadium	6	0.23%	Vanadium
Metal	Iron	7439-89-6	mg/kg	2638	2637	99.96%	2610	13,669	130000		5,885	17,601	415	15.73%	33,326	18	0.68%	Yes			0.00%	
SVOC	Benzo(a)anthracene	56-55-3	µg/kg	1240	616	49.68%	37	407	13000	E	840			0.00%	3,793	12	0.97%	No	Benzo(a)anthracene		0.00%	
SVOC	Benzo(b)fluoranthene	205-99-2	µg/kg	1245	534	42.89%	38	458	13000	E	954			0.00%	3,793	14	1.12%	No	Benzo(b)fluoranthene		0.00%	
Radionuclide	Americium-241	86954-36-1	pCi/g	2018	1556	77.11%	-0.018	5.84	3640		108	0.022	1095	54.26%	7.69	40	1.98%	No	Americium-241	8	0.40%	Americium-241
PCB	PCB-1260	11096-82-5	µg/kg	845	147	17.40%	6.2	162	7800		570			0.00%	1,349	17	2.01%	No	PCB-1260		0.00%	
SVOC	Dibenz(a,h)anthracene	53-70-3	µg/kg	1231	172	13.97%	28	260	2800		253			0.00%	379	27	2.19%	No	Dibenz(a,h)anthracene		0.00%	
PCB	PCB-1254	11097-69-1	µg/kg	849	158	18.61%	6.8	209	9000		712			0.00%	1,349	21	2.47%	No	PCB-1254		0.00%	
Metal	Arsenic	7440-38-2	mg/kg	2629	2601	98.93%	0.29	4.78	56.2		2.98	10.1	71	2.70%	2.41	71	2.70%	No	Arsenic	5	0.19%	Arsenic
Radionuclide	Cesium-137	10045-97-3	pCi/g	364	319	87.64%	-0.0722	0.442	2.5		0.537	1.69	13	3.57%	0.221	13	3.57%	Yes		3	0.82%	
Metal	Aluminum	7429-90-5	mg/kg	2638	2636	99.92%	1450	11,271	61000		6,308	16,715	454	17.21%	24,774	105	3.98%	No	Aluminum		0.00%	
Radionuclide	Plutonium-239/240		pCi/g	2334	1989	85.22%	-0.0108	21.9	16200	B	440	0.066	1287	55.14%	9.80	127	5.44%	No	Plutonium-239/240	16	0.69%	Plutonium-239/240
Metal	Chromium (total)	7440-47-3	mg/kg	2640	2620	99.24%	1.2	15.4	210		13.2	4.464	678	25.68%	28.4	149	5.64%	No	Chromium (total)		0.00%	
Metal	Manganese	7439-96-5	mg/kg	2633	2631	99.92%	15	227	2220		139	365	266	10.10%	419	184	6.99%	Yes			0.00%	
Radionuclide	Radium-228	15262-20-1	pCi/g	172	169	98.26%	0.001	1.72	3.5		0.539	2.31	21	12.21%	0.111	21	12.21%	Yes		21	12.21%	
SVOC	Benzo(a)pyrene	50-32-8	µg/kg	1249	520	41.63%	36	415	13000	D	807			0.00%	379	198	15.85%	No	Benzo(a)pyrene	12	0.96%	Benzo(a)pyrene

The frequency of detection of the analyte concentration above the PRG is greater than (>) 0% and less than (<) 1%

The frequency of detection of the analyte concentration above the PRG is greater than or equal to (≥) 1% and less than (<) 5%

The frequency of detection of the analyte concentration above the PRG is greater than or equal to (≥) 5%

Notes:

Chromium (total) is conservatively compared with the Chromium VI PRG.

A Key to laboratory qualifier codes is provided in Table 11.

For analytes with no detections (Percent Detection Frequency = 0%), the Minimum and Maximum Concentration columns contain the minimum and maximum non-detection values.

The Mean Concentration and Standard Deviation columns are calculated based on one-half of all the non-detected values for the analyte, except for radionuclides where all results are used.

The PCBs identified above under the Standard Name Column are equivalent to Aroclors, for example PCB-1254 is the same as Aroclor-1254.

For arsenic, cesium-134, cesium-137, and radium-228 the Surface Background Mean + 2SD value is greater than the WRW PRG. Therefore, only those results greater than both the Surface Background Mean +2SD and WRW PRG are reported under AOI Screen 2.

As, Cs-134, Cs-137, and Ra-228 adjusted for Surface Background Mean+2SD

Table 5 Subsurface Soil Summary Statistics > 0.5 and ≤ 3.0 feet

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
Metal	Aluminum	7429-90-5	mg/kg	1738	1738	100.00%	870	16,680	110000		10,464	30,392	161	9.26%	284,902		0.00%				0.00%	
Metal	Antimony	7440-36-0	mg/kg	1695	369	21.77%	0.19	1.16	350		10.7	9.78	9	0.53%	511		0.00%				0.00%	
Metal	Barium	7440-39-3	mg/kg	1739	1739	100.00%	13	99.3	1000		75.1	291	39	2.24%	33,033		0.00%				0.00%	
Metal	Beryllium	7440-41-7	mg/kg	1732	1489	85.97%	0.052	0.856	15		0.649	15.8		0.00%	1,151		0.00%				0.00%	
Metal	Boron	7440-42-8	mg/kg	1409	1107	78.57%	0.48	3.65	76		3.81			0.00%	108,980		0.00%				0.00%	
Metal	Cadmium	7440-43-9	mg/kg	1737	583	33.56%	0.05	0.901	362		10.3	1.08	80	4.61%	1,051		0.00%				0.00%	
Metal	Cobalt	7440-48-4	mg/kg	1739	1735	99.77%	0.89	6.80	74		5.27	15.4	70	4.03%	1,401		0.00%				0.00%	
Metal	Copper	7440-50-8	mg/kg	1739	1730	99.48%	0.7	20.1	1190		47.6	23.8	222	12.77%	51,100		0.00%				0.00%	
Metal	Iron	7439-89-6	mg/kg	1738	1738	100.00%	1650	14,812	56000		5,892	28,459	49	2.82%	383,250		0.00%				0.00%	
Metal	Lithium	7439-93-2	mg/kg	1732	1652	95.38%	1.3	11.3	64		6.69	20.5	129	7.45%	25,550		0.00%				0.00%	
Metal	Manganese	7439-96-5	mg/kg	1738	1736	99.88%	8.8	185	1300		139	487	67	3.86%	4,815		0.00%				0.00%	
Metal	Mercury	7439-97-6	mg/kg	1688	1299	76.95%	0.0019	0.077	16		0.436	0.488	17	1.01%	379		0.00%				0.00%	
Metal	Molybdenum	7439-98-7	mg/kg	1737	1078	62.06%	0.14	0.854	24		1.44	29.1		0.00%	6,388		0.00%				0.00%	
Metal	Nickel	7440-02-0	mg/kg	1739	1714	98.56%	0.88	15.5	330		14.4	43.0	27	1.55%	25,550		0.00%				0.00%	
Metal	Selenium	7782-49-2	mg/kg	1737	223	12.84%	0.06	0.424	4.3		0.261	1.68	10	0.58%	6,388		0.00%				0.00%	
Metal	Silver	7440-22-4	mg/kg	1736	446	25.69%	0.064	0.544	110		4.48	26.6	3	0.17%	6,388		0.00%				0.00%	
Metal	Strontium	7440-24-6	mg/kg	1737	1733	99.77%	3.2	36.9	368		37.4	136	52	2.99%	766,500		0.00%				0.00%	
Metal	Thallium	7440-28-0	mg/kg	1731	259	14.96%	0.1	0.529	6.3		0.434	1.42	68	3.93%	89.4		0.00%				0.00%	
Metal	Tin	7440-31-5	mg/kg	1733	189	10.91%	0.47	1.97	110		4.03	354		0.00%	766,500		0.00%				0.00%	
Metal	Titanium	7440-32-6	mg/kg	1412	1412	100.00%	23	216	1420		139			0.00%	1.95E+06		0.00%				0.00%	
Metal	Uranium (total)		mg/kg	1431	189	13.21%	0.54	3.03	1600		44.8	3.04	76	5.31%	3,833		0.00%				0.00%	
Metal	Vanadium	7440-62-2	mg/kg	1739	1739	100.00%	2.1	34.4	110		15.4	63.3	91	5.23%	1,278		0.00%				0.00%	
Metal	Zinc	7440-66-6	mg/kg	1739	1735	99.77%	2.2	47.3	1800		85.2	78.3	124	7.13%	383,250		0.00%				0.00%	
Wet Chem	Cyanide	57-12-5	mg/kg	59	5	8.47%	0.18	0.396	0.23	B	0.533			0.00%	25,550		0.00%				0.00%	
Wet Chem	Fluoride	16984-48-8	mg/kg	15	15	100.00%	0.15	5.92	17.6		5.39			0.00%	76,650		0.00%				0.00%	
Wet Chem	Nitrate / Nitrite	ConID 184	mg/kg	165	100	60.61%	0.02	189	20000		1,617	4.33	26	15.76%	2.04E+06		0.00%				0.00%	
Wet Chem	Nitrite	ConID 187	mg/kg	5	4	80.00%	0.111	1.25	2.49	J	1.18			0.00%	127,750		0.00%				0.00%	
Dioxins/Furans	123478-HxCDD	39227-28-6	µg/kg	6	2	33.33%	0.00022	2.89E-04	0.00034	BJ	1.46E-04			0.00%	5.55		0.00%				0.00%	
Dioxins/Furans	123678-HxCDD	57653-85-7	µg/kg	6	3	50.00%	0.00061	0.001	0.0038	BJ	0.001			0.00%	5.55		0.00%				0.00%	
Dioxins/Furans	123789-HxCDD	19408-74-3	µg/kg	6	3	50.00%	0.00061	6.15E-04	0.0012	BJ	3.66E-04			0.00%	5.55		0.00%				0.00%	
Dioxins/Furans	2378-TCDD	1746-01-6	µg/kg	7	2	28.57%	0.00024	0.015	0.00059	J	0.038			0.00%	0.285		0.00%				0.00%	
Dioxins/Furans	Hexachlorodibenzo-p-dioxin	34465-46-8	µg/kg	1	0	0.00%	0.1	0.050	0.1					0.00%	5.55		0.00%				0.00%	
Herbicide	2,4,5-TP (Silvex)	93-72-1	µg/kg	6	0	0.00%	21	18.8	120		20.2			0.00%	1.95E+06		0.00%				0.00%	
Herbicide	2,4-D	94-75-7	µg/kg	6	0	0.00%	83	45.1	120		7.34			0.00%	9.22E+06		0.00%				0.00%	
Herbicide	2,4-DB	94-82-6	µg/kg	5	0	0.00%	83	42.1	87		0.822			0.00%	7.37E+06		0.00%				0.00%	
Herbicide	4-Nitrophenol	100-02-7	µg/kg	593	0	0.00%	890	1,799	380000		7,764			0.00%	7.37E+06		0.00%				0.00%	
Herbicide	Dalapon	75-99-0	µg/kg	5	0	0.00%	42	21.2	44		0.447			0.00%	2.76E+07		0.00%				0.00%	
Herbicide	Dicamba	1918-00-9	µg/kg	5	1	20.00%	2.2	17.2	2.2	J	8.41			0.00%	2.76E+07		0.00%				0.00%	
Herbicide	Dinoseb	88-85-7	µg/kg	6	0	0.00%	12	68.6	760		153			0.00%	921,651		0.00%				0.00%	
Herbicide	MCPA	94-74-6	µg/kg	5	0	0.00%	8300	4,210	8700		82.2			0.00%	460,825		0.00%				0.00%	
Herbicide	MCPP	93-65-2	µg/kg	5	0	0.00%	8300	4,210	8700		82.2			0.00%	921,651		0.00%				0.00%	
PCB	PCB-1016	12674-11-2	µg/kg	389	2	0.51%	2.6	113	65		1,068			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1221	11104-28-2	µg/kg	389	0	0.00%	34	113	36000		1,068			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1232	11141-16-5	µg/kg	389	0	0.00%	34	114	36000		1,068			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1242	53469-21-9	µg/kg	389	0	0.00%	34	113	36000		1,068			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1248	12672-29-6	µg/kg	389	8	2.06%	44	150	5900		1,127			0.00%	15,514		0.00%				0.00%	
Pesticide	4,4'-DDD	72-54-8	µg/kg	48	2	4.17%	4.2	25.8	7.6	J	90.0			0.00%	178,570		0.00%				0.00%	
Pesticide	4,4'-DDE	72-55-9	µg/kg	48	4	8.33%	0.46	11.6	4.8	J	32.1			0.00%	126,049		0.00%				0.00%	
Pesticide	4,4'-DDT	50-29-3	µg/kg	48	2	4.17%	0.79	27.3	6.8	J	96.0			0.00%	125,658		0.00%				0.00%	

Ra-228 adjusted for Subsurface Background Mean +2SD

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Table 5 Subsurface Soil Summary Statistics > 0.5 and ≤ 3.0 feet

6/28/2005

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
Pesticide	Aldrin	309-00-2	µg/kg	48	0	0.00%	1.8	10.5	430		32.3			0.00%	2,024		0.00%				0.00%	
Pesticide	alpha-BHC	319-84-6	µg/kg	48	1	2.08%	6.8	8.37	6.8	J	23.8			0.00%	6,555		0.00%				0.00%	
Pesticide	alpha-Chlordane	5103-71-9	µg/kg	19	0	0.00%	2	22.1	95		22.5			0.00%	117,997		0.00%				0.00%	
Pesticide	beta-BHC	319-85-7	µg/kg	48	0	0.00%	1.8	14.4	637		48.0			0.00%	22,942		0.00%				0.00%	
Pesticide	beta-Chlordane	5103-74-2	µg/kg	8	0	0.00%	84	45.4	95		1.79			0.00%	117,997		0.00%				0.00%	
Pesticide	Chlordane		µg/kg	29	0	0.00%	18	68.9	1510		142			0.00%	117,997		0.00%				0.00%	
Pesticide	Chlorpyriphos	2921-88-2	µg/kg	1	0	0.00%	8.1	4.05	8.1					0.00%	2.76E+06		0.00%				0.00%	
Pesticide	delta-BHC	319-86-8	µg/kg	48	0	0.00%	1.8	20.3	952		72.0			0.00%	6,555		0.00%				0.00%	
Pesticide	Demeton-S	126-75-0	µg/kg	1	0	0.00%	8.1	4.05	8.1					0.00%	36,866		0.00%				0.00%	
Pesticide	Dieldrin	60-57-1	µg/kg	48	3	6.25%	1.4	7.73	6.4	J	16.4			0.00%	2,151		0.00%				0.00%	
Pesticide	Endosulfan I	959-98-8	µg/kg	48	1	2.08%	3.6	6.51	3.6	J	16.5			0.00%	5.53E+06		0.00%				0.00%	
Pesticide	Endosulfan II	33213-65-9	µg/kg	48	2	4.17%	0.91	11.5	5.1	J	32.1			0.00%	5.53E+06		0.00%				0.00%	
Pesticide	Endosulfan sulfate	1031-07-8	µg/kg	48	2	4.17%	0.87	137	5.3	J	543			0.00%	5.53E+06		0.00%				0.00%	
Pesticide	Endrin	72-20-8	µg/kg	48	4	8.33%	2.8	15.8	12		47.7			0.00%	276,495		0.00%				0.00%	
Pesticide	Endrin aldehyde	7421-93-4	µg/kg	40	2	5.00%	5.4	57.7	9	J	204			0.00%	276,495		0.00%				0.00%	
Pesticide	Endrin ketone	53494-70-5	µg/kg	18	0	0.00%	1.8	6.51	22		4.10			0.00%	383,250		0.00%				0.00%	
Pesticide	gamma-BHC (Lindane)	58-89-9	µg/kg	48	1	2.08%	10	10.7	10	J	32.2			0.00%	31,864		0.00%				0.00%	
Pesticide	gamma-Chlordane	12789-03-6	µg/kg	11	0	0.00%	2	5.10	86		12.6			0.00%	117,997		0.00%				0.00%	
Pesticide	Heptachlor	76-44-8	µg/kg	48	0	0.00%	1.8	8.42	318		23.8			0.00%	7,647		0.00%				0.00%	
Pesticide	Heptachlor epoxide	1024-57-3	µg/kg	48	1	2.08%	4.2	21.8	4.2	J	64.6			0.00%	3,782		0.00%				0.00%	
Pesticide	Hexachlorocyclopentadiene	77-47-4	µg/kg	593	0	0.00%	330	426	77000		1,568			0.00%	4.38E+06		0.00%				0.00%	
Pesticide	Methoxychlor	72-43-5	µg/kg	48	0	0.00%	3.5	372	19100		1,452			0.00%	4.61E+06		0.00%				0.00%	
Pesticide	Toxaphene	8001-35-2	µg/kg	48	0	0.00%	170	685	27000		2,030			0.00%	31,284		0.00%				0.00%	
SVOC	1,2,4,5-Tetrachlorobenzene	95-94-3	µg/kg	3	0	0.00%	370	190	390		5.00			0.00%	276,495		0.00%				0.00%	
SVOC	1,2,4-Trichlorobenzene	120-82-1	µg/kg	1803	15	0.83%	0.49	37.5	36000	JE	852			0.00%	1.74E+06		0.00%				0.00%	
SVOC	1,2-Diphenylhydrazine	122-66-7	µg/kg	2	0	0.00%	370	190	390		7.07			0.00%	43,021		0.00%				0.00%	
SVOC	2,3,4,6-Tetrachlorophenol	58-90-2	µg/kg	1	0	0.00%	380	190	380					0.00%	2.76E+07		0.00%				0.00%	
SVOC	2,4,5-Trichlorophenol	95-95-4	µg/kg	595	0	0.00%	330	432	77000		1,581			0.00%	9.22E+07		0.00%				0.00%	
SVOC	2,4,6-Trichlorophenol	88-06-2	µg/kg	595	0	0.00%	330	369	77000		1,570			0.00%	3.13E+06		0.00%				0.00%	
SVOC	2,4,6-Trinitrotoluene	118-96-7	µg/kg	6	0	0.00%	0.2	0.113	0.23		0.006			0.00%	460,825		0.00%				0.00%	
SVOC	2,4-Dichlorophenol	120-83-2	µg/kg	595	0	0.00%	330	369	77000		1,570			0.00%	2.76E+06		0.00%				0.00%	
SVOC	2,4-Dimethylphenol	105-67-9	µg/kg	595	0	0.00%	330	369	77000		1,570			0.00%	1.84E+07		0.00%				0.00%	
SVOC	2,4-Dinitrophenol	51-28-5	µg/kg	592	1	0.17%	470	1,800	470	J	7,770			0.00%	1.84E+06		0.00%				0.00%	
SVOC	2,4-Dinitrotoluene	121-14-2	µg/kg	597	0	0.00%	200	368	77000		1,568			0.00%	1.84E+06		0.00%				0.00%	
SVOC	2,6-Dinitrotoluene	606-20-2	µg/kg	596	0	0.00%	330	369	77000		1,569			0.00%	921,651		0.00%				0.00%	
SVOC	2-Chloronaphthalene	91-58-7	µg/kg	596	0	0.00%	330	369	77000		1,569			0.00%	7.37E+07		0.00%				0.00%	
SVOC	2-Chlorophenol	95-57-8	µg/kg	595	1	0.17%	8.5	368	8.5	J	1,570			0.00%	6.39E+06		0.00%				0.00%	
SVOC	2-Methylnaphthalene	91-57-6	µg/kg	596	46	7.72%	37	429	83000		3,391			0.00%	3.69E+06		0.00%				0.00%	
SVOC	2-Methylphenol	95-48-7	µg/kg	600	0	0.00%	330	370	77000		1,564			0.00%	4.61E+07		0.00%				0.00%	
SVOC	2-Nitroaniline	88-74-4	µg/kg	596	0	0.00%	690	1,793	380000		7,744			0.00%	2.21E+06		0.00%				0.00%	
SVOC	3,3'-Dichlorobenzidine	91-94-1	µg/kg	595	0	0.00%	350	825	150000		3,051			0.00%	76,667		0.00%				0.00%	
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	µg/kg	594	0	0.00%	890	1,803	380000		7,757			0.00%	92,165		0.00%				0.00%	
SVOC	4-Chloroaniline	106-47-8	µg/kg	595	0	0.00%	330	647	150000		3,068			0.00%	3.69E+06		0.00%				0.00%	
SVOC	4-Methylphenol	106-44-5	µg/kg	586	1	0.17%	95	368	95	J	1,582			0.00%	4.61E+06		0.00%				0.00%	
SVOC	4-Nitroaniline	100-01-6	µg/kg	595	0	0.00%	690	1,796	380000		7,751			0.00%	2.39E+06		0.00%				0.00%	
SVOC	Acenaphthene	83-32-9	µg/kg	596	102	17.11%	25	273	24000	J	1,057			0.00%	5.10E+07		0.00%				0.00%	
SVOC	Anthracene	120-12-7	µg/kg	596	119	19.97%	36	275	13000		734			0.00%	2.55E+08		0.00%				0.00%	
SVOC	Benzo(a)anthracene	56-55-3	µg/kg	595	182	30.59%	27	473	33000		1,706			0.00%	43,616		0.00%				0.00%	
SVOC	Benzo(b)fluoranthene	205-99-2	µg/kg	595	140	23.53%	26	520	29000		2,210			0.00%	43,616		0.00%				0.00%	

Ra-228 adjusted for Subsurface Background Mean +2SD

Table 5 Subsurface Soil Summary Statistics > 0.5 and ≤ 3.0 feet

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
SVOC	Benzo(k)fluoranthene	207-08-9	µg/kg	594	127	21.38%	22	490	29000		2,121			0.00%	436,159		0.00%				0.00%	
SVOC	Benzoic Acid	65-85-0	µg/kg	588	2	0.34%	160	1,803	300	J	7,796			0.00%	3.69E+09		0.00%				0.00%	
SVOC	Benzyl Alcohol	100-51-6	µg/kg	590	2	0.34%	260	649	1600		3,081			0.00%	2.76E+08		0.00%				0.00%	
SVOC	bis(2-Chloroethyl) ether	111-44-4	µg/kg	595	0	0.00%	330	369	77000		1,570			0.00%	43,315		0.00%				0.00%	
SVOC	bis(2-Chloroisopropyl) ether	108-60-1	µg/kg	596	0	0.00%	330	369	77000		1,569			0.00%	681,967		0.00%				0.00%	
SVOC	bis(2-ethylhexyl)phthalate	117-81-7	µg/kg	595	78	13.11%	16.8	351	1100		1,572			0.00%	2.46E+06		0.00%				0.00%	
SVOC	Butylbenzylphthalate	85-68-7	µg/kg	595	14	2.35%	16.5	367	1300		1,571			0.00%	1.84E+08		0.00%				0.00%	
SVOC	Carbazole	86-74-8	µg/kg	4	0	0.00%	350	333	810		106			0.00%	1.73E+06		0.00%				0.00%	
SVOC	Chrysene	218-01-9	µg/kg	595	184	30.92%	28	515	36000		1,927			0.00%	4.36E+06		0.00%				0.00%	
SVOC	Dibenzofuran	132-64-9	µg/kg	595	49	8.24%	20	311	7000	J	332			0.00%	2.56E+06		0.00%				0.00%	
SVOC	Diethylphthalate	84-66-2	µg/kg	595	4	0.67%	24.9	423	330	J	1,566			0.00%	7.37E+08		0.00%				0.00%	
SVOC	Dimethoate	60-51-5	µg/kg	1	0	0.00%	8.1	4.05	8.1					0.00%	184,330		0.00%				0.00%	
SVOC	Dimethylphthalate	131-11-3	µg/kg	595	2	0.34%	89	368	460	J	1,570			0.00%	9.22E+09		0.00%				0.00%	
SVOC	Di-n-butylphthalate	84-74-2	µg/kg	595	28	4.71%	23	363	1400		1,571			0.00%	9.22E+07		0.00%				0.00%	
SVOC	Di-n-octylphthalate	117-84-0	µg/kg	595	2	0.34%	240	378	6000		1,587			0.00%	3.69E+07		0.00%				0.00%	
SVOC	Fluoranthene	206-44-0	µg/kg	595	198	33.28%	23	821	66000		3,756			0.00%	3.40E+07		0.00%				0.00%	
SVOC	Fluorene	86-73-7	µg/kg	595	80	13.45%	21	327	7100	J	446			0.00%	3.69E+07		0.00%				0.00%	
SVOC	Hexachlorobenzene	118-74-1	µg/kg	596	3	0.50%	170	367	260	J	1,569			0.00%	21,508		0.00%				0.00%	
SVOC	Hexachlorobutadiene	87-68-3	µg/kg	1811	0	0.00%	0.516	18.9	7088		113			0.00%	255,500		0.00%				0.00%	
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	595	116	19.50%	39	455	20000		1,863			0.00%	43,616		0.00%				0.00%	
SVOC	Isophorone	78-59-1	µg/kg	595	1	0.17%	840	369	840		1,570			0.00%	3.63E+07		0.00%				0.00%	
SVOC	Naphthalene	91-20-3	µg/kg	1803	352	19.52%	0.44	261	350000	E	8,274			0.00%	1.61E+07		0.00%				0.00%	
SVOC	Nitrobenzene	98-95-3	µg/kg	601	0	0.00%	330	370	77000		1,562			0.00%	497,333		0.00%				0.00%	
SVOC	N-Nitrosodiethylamine	55-18-5	µg/kg	3	0	0.00%	380	318	780		111			0.00%	229		0.00%				0.00%	
SVOC	N-Nitrosodimethylamine	62-75-9	µg/kg	3	0	0.00%	380	318	780		111			0.00%	675		0.00%				0.00%	
SVOC	N-Nitrosodi-n-butylamine	924-16-3	µg/kg	3	0	0.00%	370	190	390		5.00			0.00%	5,977		0.00%				0.00%	
SVOC	N-Nitroso-di-n-propylamine	621-64-7	µg/kg	595	1	0.17%	700	369	700		1,570			0.00%	4,929		0.00%				0.00%	
SVOC	N-nitrosodiphenylamine	86-30-6	µg/kg	586	2	0.34%	67	331	17000	J	700			0.00%	7.04E+06		0.00%				0.00%	
SVOC	N-Nitrosopyrrolidine	930-55-2	µg/kg	1	0	0.00%	1900	950	1900					0.00%	16,387		0.00%				0.00%	
SVOC	Parathion	56-38-2	µg/kg	1	0	0.00%	8.1	4.05	8.1					0.00%	5.53E+06		0.00%				0.00%	
SVOC	Pentachlorobenzene	608-93-5	µg/kg	3	0	0.00%	370	190	390		5.00			0.00%	737,321		0.00%				0.00%	
SVOC	Pentachlorophenol	87-86-5	µg/kg	595	3	0.50%	120	1,787	350	J	7,752			0.00%	202,777		0.00%				0.00%	
SVOC	Phenol	108-95-2	µg/kg	594	5	0.84%	98	368	530		1,572			0.00%	2.76E+08		0.00%				0.00%	
SVOC	Pyrene	129-00-0	µg/kg	594	188	31.65%	21	863	67000		4,075			0.00%	2.55E+07		0.00%				0.00%	
VOC	1,1,1,2-Tetrachloroethane	630-20-6	µg/kg	1706	0	0.00%	0.487	4.96	5512		79.4			0.00%	1.05E+06		0.00%				0.00%	
VOC	1,1,1-Trichloroethane	71-55-6	µg/kg	2028	39	1.92%	1	14.2	18000	JE	403			0.00%	1.06E+08		0.00%				0.00%	
VOC	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	2021	1	0.05%	3	6.28	3	J	78.9			0.00%	120,551		0.00%				0.00%	
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	µg/kg	1712	0	0.00%	0.589	9.60	16170		217			0.00%	2.74E+10		0.00%				0.00%	
VOC	1,1,2-Trichloroethane	79-00-5	µg/kg	2032	0	0.00%	0.487	6.42	5512		81.3			0.00%	322,253		0.00%				0.00%	
VOC	1,1-Dichloroethane	75-34-3	µg/kg	2027	8	0.39%	1.5	6.26	239	E	76.3			0.00%	3.12E+07		0.00%				0.00%	
VOC	1,1-Dichloroethene	75-35-4	µg/kg	2027	15	0.74%	2	7.10	110		93.0			0.00%	199,706		0.00%				0.00%	
VOC	1,2,3-Trichloropropane	96-18-4	µg/kg	1705	1	0.06%	4	7.42	4	J	154			0.00%	23,910		0.00%				0.00%	
VOC	1,2-Dibromo-3-chloropropane	96-12-8	µg/kg	1705	1	0.06%	3	10.7	3	J	210			0.00%	34,137		0.00%				0.00%	
VOC	1,2-Dibromoethane	106-93-4	µg/kg	1708	0	0.00%	0.487	4.98	5512		82.3			0.00%	403		0.00%				0.00%	
VOC	1,2-Dichlorobenzene	95-50-1	µg/kg	1792	2	0.11%	5.7	14.5	260	BJ	89.3			0.00%	3.32E+07		0.00%				0.00%	
VOC	1,2-Dichloroethane	107-06-2	µg/kg	2020	10	0.50%	1.3	6.39	8.3		80.1			0.00%	152,603		0.00%				0.00%	
VOC	1,2-Dichloroethene	540-59-0	µg/kg	313	1	0.32%	110	13.1	110		55.6			0.00%	1.15E+07		0.00%				0.00%	
VOC	1,2-Dichloropropane	78-87-5	µg/kg	2027	3	0.15%	1.7	5.99	13		74.5			0.00%	441,907		0.00%				0.00%	
VOC	1,3-Dichlorobenzene	541-73-1	µg/kg	1804	1	0.06%	5.3	18.3	5.3	J	96.4			0.00%	3.83E+07		0.00%				0.00%	

Ra-228 adjusted for Subsurface Background Mean +2SD

Table 5 Subsurface Soil Summary Statistics > 0.5 and ≤ 3.0 feet

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
VOC	1,4-Dichlorobenzene	106-46-7	µg/kg	1787	2	0.11%	0.24	17.0	170		146			0.00%	1.05E+06		0.00%				0.00%	
VOC	1,4-Dioxane	123-91-1	µg/kg	6	0	0.00%	103	170	1500		284			0.00%	4.35E+06		0.00%				0.00%	
VOC	2-Butanone	78-93-3	µg/kg	1958	113	5.77%	1	123	5400	B	3,053			0.00%	5.33E+08		0.00%				0.00%	
VOC	2-Methyl-1-propanol	78-83-1	µg/kg	5	0	0.00%	103	53.4	114		2.10			0.00%	3.83E+08		0.00%				0.00%	
VOC	4-Methyl-2-pentanone	108-10-1	µg/kg	2010	26	1.29%	1	41.6	77		914			0.00%	9.57E+08		0.00%				0.00%	
VOC	Acetone	67-64-1	µg/kg	1994	484	24.27%	1	201	10000	JE	5,041			0.00%	1.15E+09		0.00%				0.00%	
VOC	Benzene	71-43-2	µg/kg	2029	12	0.59%	0.15	6.12	240	B	75.5			0.00%	270,977		0.00%				0.00%	
VOC	Bromodichloromethane	75-27-4	µg/kg	2026	0	0.00%	0.487	6.04	5512		76.6			0.00%	771,304		0.00%				0.00%	
VOC	Bromoform	75-25-2	µg/kg	2023	1	0.05%	1	6.73	1	J	89.5			0.00%	4.83E+06		0.00%				0.00%	
VOC	Bromomethane	74-83-9	µg/kg	2006	0	0.00%	0.944	12.7	10680		176			0.00%	241,033		0.00%				0.00%	
VOC	Carbon Disulfide	75-15-0	µg/kg	2024	6	0.30%	1	8.76	27	J	128			0.00%	1.88E+07		0.00%				0.00%	
VOC	Carbon Tetrachloride	56-23-5	µg/kg	2028	16	0.79%	1.3	7.73	24.3		120			0.00%	97,124		0.00%				0.00%	
VOC	Chlorobenzene	108-90-7	µg/kg	2024	2	0.10%	3	6.09	74		74.6			0.00%	7.67E+06		0.00%				0.00%	
VOC	Chloroethane	75-00-3	µg/kg	2011	3	0.15%	3.79	13.0	48.2		168			0.00%	1.65E+07		0.00%				0.00%	
VOC	Chloroform	67-66-3	µg/kg	2027	17	0.84%	0.42	6.58	280	B	86.5			0.00%	90,270		0.00%				0.00%	
VOC	Chloromethane	74-87-3	µg/kg	2024	0	0.00%	0.934	11.6	11160		157			0.00%	1.32E+06		0.00%				0.00%	
VOC	cis-1,3-Dichloropropene	10061-01-5	µg/kg	2027	0	0.00%	0.487	6.16	5512		77.2			0.00%	223,462		0.00%				0.00%	
VOC	Dibromochloromethane	124-48-1	µg/kg	2027	0	0.00%	0.487	6.17	5512		77.3			0.00%	569,296		0.00%				0.00%	
VOC	Dichlorodifluoromethane	75-71-8	µg/kg	1680	2	0.12%	8.74	13.3	12.6		289			0.00%	2.64E+06		0.00%				0.00%	
VOC	Ether	60-29-7	µg/kg	3	0	0.00%	52.3	27.0	57		1.28			0.00%	2.56E+08		0.00%				0.00%	
VOC	ethyl acetate	141-78-6	µg/kg	5	0	0.00%	51.3	26.6	57		1.09			0.00%	1.15E+09		0.00%				0.00%	
VOC	Ethylbenzene	100-41-4	µg/kg	2029	79	3.89%	0.615	6.63	1100	E	78.0			0.00%	6.19E+07		0.00%				0.00%	
VOC	Hexachloroethane	67-72-1	µg/kg	596	0	0.00%	330	369	77000		1,569			0.00%	1.28E+06		0.00%				0.00%	
VOC	Isopropylbenzene	98-82-8	µg/kg	1700	9	0.53%	0.73	4.82	300	JE	77.3			0.00%	375,823		0.00%				0.00%	
VOC	m,p-Xylene		µg/kg	1	0	0.00%	63	31.5	63					0.00%	1.22E+07		0.00%				0.00%	
VOC	Methylene Chloride	75-09-2	µg/kg	2029	294	14.49%	0.57	11.6	100		125			0.00%	3.13E+06		0.00%				0.00%	
VOC	o-Xylene	95-47-6	µg/kg	2	0	0.00%	63	171	620		197			0.00%	1.22E+07		0.00%				0.00%	
VOC	Styrene	100-42-5	µg/kg	2019	4	0.20%	1.7	6.34	19.3		81.7			0.00%	1.59E+08		0.00%				0.00%	
VOC	Toluene	108-88-3	µg/kg	2031	408	20.09%	0.14	30.0	2000		159			0.00%	3.56E+07		0.00%				0.00%	
VOC	trans-1,3-Dichloropropene	10061-02-6	µg/kg	2022	0	0.00%	0.487	6.21	5512		77.0			0.00%	239,434		0.00%				0.00%	
VOC	Trichlorofluoromethane	75-69-4	µg/kg	1707	29	1.70%	1	9.06	13.8		198			0.00%	1.74E+07		0.00%				0.00%	
VOC	Vinyl acetate	108-05-4	µg/kg	290	0	0.00%	6	25.5	1500		111			0.00%	3.04E+07		0.00%				0.00%	
VOC	Vinyl Chloride	75-01-4	µg/kg	2027	2	0.10%	2.8	12.1	7.67		156			0.00%	24,948		0.00%				0.00%	
VOC	Xylene	1330-20-7	µg/kg	2027	144	7.10%	0.785	12.4	4500	E	151			0.00%	1.22E+07		0.00%				0.00%	
Radionuclide	Cesium-134	13967-70-9	pCi/g	88	82	93.18%	-0.381	-0.027	0.15		0.105			0.00%	0.910		0.00%				0.00%	
Radionuclide	Cesium-137	10045-97-3	pCi/g	128	124	96.88%	-0.0282	0.149	0.9565	X	0.169	0.143	52	40.63%	2.54		0.00%				0.00%	
Radionuclide	Iodine-129	15046-84-1	pCi/g	7	0	0.00%	-0.648	-0.153	0.125		0.297			0.00%	90.3		0.00%				0.00%	
Radionuclide	Nickel-59	14336-70-0	pCi/g	7	0	0.00%	0	0.209	0.42		0.197			0.00%	36,397		0.00%				0.00%	
Radionuclide	Plutonium-238	13981-16-3	pCi/g	47	13	27.66%	-0.00164	0.042	0.425		0.104			0.00%	68.7		0.00%				0.00%	
Radionuclide	Radium-226	13982-63-3	pCi/g	34	34	100.00%	0.4325	2.13	9.28	X	2.17	1.34	14	41.18%	31.0		0.00%				0.00%	
Radionuclide	Strontium-89/90		pCi/g	128	120	93.75%	0.01577	0.178	0.74	J	0.120	0.570	1	0.78%	152		0.00%				0.00%	
Radionuclide	Uranium-233/234		pCi/g	813	802	98.65%	0.142	1.27	25.7624		2.61	2.08	48	5.90%	291		0.00%				0.00%	
Radionuclide	Uranium-234	13966-29-5	pCi/g	1	1	100.00%	0.6	0.600	0.6					0.00%	291		0.00%				0.00%	
Radionuclide	Uranium-235	15117-96-1	pCi/g	814	344	42.26%	-0.00884	0.065	4.88		0.683	0.162	54	6.63%	12.1		0.00%				0.00%	

Ra-228 adjusted for Subsurface Background Mean +2SD

Table 5 Subsurface Soil Summary Statistics > 0.5 and ≤ 3.0 feet

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
Radionuclide	Uranium-238	7440-61-1	pCi/g	814	797	97.91%	0.132	1.87	174	B	9.26	1.77	56	6.88%	337		0.00%				0.00%	
Metal	Chromium (total)	7440-47-3	mg/kg	1739	1738	99.94%	1.5	19.3	593		20.7	42.2	55	3.16%	327	1	0.06%	No	Chromium (total)		0.00%	
VOC	Trichloroethene	79-01-6	µg/kg	2032	58	2.85%	0.8	64.3	50000	JE	1,443			0.00%	20,354	3	0.15%	No	Trichloroethene		0.00%	
SVOC	Dibenz(a,h)anthracene	53-70-3	µg/kg	595	55	9.24%	43	393	10000		1,635			0.00%	4,362	1	0.17%	No	Dibenz(a,h)anthracene		0.00%	
Metal	Lead	7439-92-1	mg/kg	1744	1743	99.94%	1.4	26.2	8500		217	26.5	146	8.37%	1000*	3	0.17%	No	Lead		0.00%	
VOC	Tetrachloroethene	127-18-4	µg/kg	2032	173	8.51%	0.62	1,092	802000	E	23,757			0.00%	77,111	5	0.25%	No	Tetrachloroethene	1	0.05%	Tetrachloroethene
PCB	PCB-1260	11096-82-5	µg/kg	389	68	17.48%	6.7	295	79000		4,019			0.00%	15,514	1	0.26%	No	PCB-1260		0.00%	
Metal	Arsenic	7440-38-2	mg/kg	1739	1726	99.25%	0.47	5.86	69.7		3.98	17.5	31	1.78%	27.7	6	0.35%	No	Arsenic		0.00%	
Radionuclide	Americium-241	86954-36-1	pCi/g	793	438	55.23%	-0.00163	2.82	1100		42.2	0.010	332	41.87%	88.4	3	0.38%	No	Americium-241	1	0.13%	Americium-241
Radionuclide	Plutonium-239/240		pCi/g	804	537	66.79%	-0.00252	13.4	6760		244	0.022	407	50.62%	112	4	0.50%	No	Plutonium-239/240	2	0.25%	Plutonium-239/240
PCB	PCB-1254	11097-69-1	µg/kg	389	91	23.39%	4.9	439	77000		4,112			0.00%	15,514	2	0.51%	No	PCB-1254		0.00%	
SVOC	Benzo(a)pyrene	50-32-8	µg/kg	595	144	24.20%	23	491	35000		1,760			0.00%	4,357	6	1.01%	No	Benzo(a)pyrene		0.00%	
Radionuclide	Radium-228	15262-20-1	pCi/g	126	125	99.21%	0.766	1.63	3.9		0.417	2.09	8	6.35%	1.28	8	6.35%	Yes			0.00%	

*The PRG value for lead is not calculated, but rather is taken from EPA's "Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities (1994)".

The frequency of detection of the analyte concentration above the PRG is greater than (>) 0% and less than (<) 1%

The frequency of detection of the analyte concentration above the PRG is greater than or equal to (≥) 1% and less than (<) 5%

The frequency of detection of the analyte concentration above the PRG is greater than or equal to (≥) 5%

Notes:

Chromium (total) is conservatively compared with the Chromium VI PRG.

A Key to laboratory qualifier codes is provided in Table 11.

For analytes with no detections (Percent Detection Frequency = 0%), the Minimum and Maximum Concentration columns contain the minimum and maximum non-detection values.

The Mean Concentration and Standard Deviation columns are calculated based on one-half of all the non-detected values for the analyte, except for radionuclides where all results are used.

The PCBs identfied above under the Standard Name Column are equivalent to Aroclors, for example PCB-1254 is the same as Aroclor-1254.

For radium-228 the Subsurface Background Mean + 2SD value is greater than the WRW PRG. Therefore, only those results greater than both the Subsurface Background Mean +2SD and WRW PRG are reported under AOI Screen 2.

Table 6 Subsurface Soil Summary Statistics > 3.0 and ≤ 8.0 feet

6/28/2005

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
Metal	Aluminum	7429-90-5	mg/kg	1400	1400	100.00%	1000	14,298	80000		9,110	30,392	79	5.64%	284,902		0.00%				0.00%	
Metal	Antimony	7440-36-0	mg/kg	1303	240	18.42%	0.18	2.42	91.3		4.91	9.78	43	3.30%	511		0.00%				0.00%	
Metal	Barium	7440-39-3	mg/kg	1400	1398	99.86%	8.6	99.6	1610	N	92.9	291	41	2.93%	33,033		0.00%				0.00%	
Metal	Beryllium	7440-41-7	mg/kg	1393	1120	80.40%	0.066	1.26	446		12.2	15.8	3	0.22%	1,151		0.00%				0.00%	
Metal	Boron	7440-42-8	mg/kg	781	582	74.52%	0.42	2.97	33		2.70			0.00%	108,980		0.00%				0.00%	
Metal	Cadmium	7440-43-9	mg/kg	1365	354	25.93%	0.04	2.55	547		28.4	1.08	79	5.79%	1,051		0.00%				0.00%	
Metal	Chromium VI		mg/kg	1	1	100.00%	0.59	0.590	0.59					0.00%	327		0.00%				0.00%	
Metal	Cobalt	7440-48-4	mg/kg	1400	1360	97.14%	0.47	6.83	701	*	19.5	15.4	48	3.43%	1,401		0.00%				0.00%	
Metal	Copper	7440-50-8	mg/kg	1399	1382	98.78%	0.74	32.9	8850		325	23.8	91	6.50%	51,100		0.00%				0.00%	
Metal	Iron	7439-89-6	mg/kg	1400	1400	100.00%	2250	14,522	290000		11,892	28,459	53	3.79%	383,250		0.00%				0.00%	
Metal	Lithium	7439-93-2	mg/kg	1376	1249	90.77%	0.4	35.4	14600		559	20.5	77	5.60%	25,550		0.00%				0.00%	
Metal	Manganese	7439-96-5	mg/kg	1400	1400	100.00%	10	188	2800		211	487	74	5.29%	4,815		0.00%				0.00%	
Metal	Mercury	7439-97-6	mg/kg	1375	841	61.16%	0.0043	0.105	25.4		0.744	0.488	21	1.53%	379		0.00%				0.00%	
Metal	Molybdenum	7439-98-7	mg/kg	1393	643	46.16%	0.14	6.10	4100		123	29.1	7	0.50%	6,388		0.00%				0.00%	
Metal	Nickel	7440-02-0	mg/kg	1400	1344	96.00%	0.72	15.7	670		22.4	43.0	32	2.29%	25,550		0.00%				0.00%	
Metal	Selenium	7782-49-2	mg/kg	1390	167	12.01%	0.12	0.447	80.8		2.28	1.68	13	0.94%	6,388		0.00%				0.00%	
Metal	Silver	7440-22-4	mg/kg	1380	254	18.41%	0.062	1.33	219		11.0	26.6	12	0.87%	6,388		0.00%				0.00%	
Metal	Strontium	7440-24-6	mg/kg	1400	1397	99.79%	2.3	47.8	506		56.1	136	77	5.50%	766,500		0.00%				0.00%	
Metal	Thallium	7440-28-0	mg/kg	1392	246	17.67%	0.21	0.490	10.8		0.818	1.42	43	3.09%	89.4		0.00%				0.00%	
Metal	Tin	7440-31-5	mg/kg	1381	177	12.82%	0.528	4.35	189		10.0	354		0.00%	766,500		0.00%				0.00%	
Metal	Titanium	7440-32-6	mg/kg	787	787	100.00%	14	158	936		99.9			0.00%	1.95E+06		0.00%				0.00%	
Metal	Uranium (total)		mg/kg	806	79	9.80%	0.74	1.76	94		4.04	3.04	40	4.96%	3,833		0.00%				0.00%	
Metal	Vanadium	7440-62-2	mg/kg	1400	1395	99.64%	3.1	31.2	740		25.5	63.3	55	3.93%	1,278		0.00%				0.00%	
Metal	Zinc	7440-66-6	mg/kg	1397	1385	99.14%	3.2	46.3	6920		214	78.3	69	4.94%	383,250		0.00%				0.00%	
Wet Chem	Ammonia	7664-41-7	mg/kg	30	8	26.67%	0.353	0.327	1.44		0.325			0.00%	1.05E+07		0.00%				0.00%	
Wet Chem	Cyanide	57-12-5	mg/kg	134	15	11.19%	0.25	1.37	43		4.75			0.00%	25,550		0.00%				0.00%	
Wet Chem	Fluoride	16984-48-8	mg/kg	22	22	100.00%	0.18	3.54	10.8		3.96			0.00%	76,650		0.00%				0.00%	
Wet Chem	Nitrate / Nitrite	ConID 184	mg/kg	238	195	81.93%	0	153	6100		635	4.33	73	30.67%	2.04E+06		0.00%				0.00%	
Wet Chem	Nitrite	ConID 187	mg/kg	7	1	14.29%	1.21	2.61	1.21	J	0.632			0.00%	127,750		0.00%				0.00%	
Dioxins/Furans	123478-HxCDD	39227-28-6	µg/kg	17	1	5.88%	0.0001	3.08E-04	0.0001	J	3.12E-04			0.00%	5.55		0.00%				0.00%	
Dioxins/Furans	123678-HxCDD	57653-85-7	µg/kg	17	3	17.65%	0.00014	3.36E-04	0.000809	J	3.24E-04			0.00%	5.55		0.00%				0.00%	
Dioxins/Furans	123789-HxCDD	19408-74-3	µg/kg	17	4	23.53%	0.00011	3.39E-04	0.000714	J	3.11E-04			0.00%	5.55		0.00%				0.00%	
Dioxins/Furans	2378-TCDD	1746-01-6	µg/kg	17	2	11.76%	0.000226	1.82E-04	0.000533	J	1.26E-04			0.00%	0.285		0.00%				0.00%	
Herbicide	2,4,5-TP (Silvex)	93-72-1	µg/kg	3	0	0.00%	14	7.17	15		0.289			0.00%	1.95E+06		0.00%				0.00%	
Herbicide	2,4-D	94-75-7	µg/kg	3	0	0.00%	84	43.2	90		1.61			0.00%	9.22E+06		0.00%				0.00%	
Herbicide	4-Nitrophenol	100-02-7	µg/kg	546	0	0.00%	51	1,346	19000		817			0.00%	7.37E+06		0.00%				0.00%	
PCB	PCB-1016	12674-11-2	µg/kg	485	8	1.65%	8.9	160	1500	J	898			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1221	11104-28-2	µg/kg	485	0	0.00%	33	161	36000		900			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1232	11141-16-5	µg/kg	484	0	0.00%	33	162	36000		901			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1242	53469-21-9	µg/kg	485	0	0.00%	33	162	36000		900			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1248	12672-29-6	µg/kg	485	9	1.86%	96	202	7200		1,000			0.00%	15,514		0.00%				0.00%	
Pesticide	4,4'-DDD	72-54-8	µg/kg	178	0	0.00%	1.8	11.0	340		16.0			0.00%	178,570		0.00%				0.00%	
Pesticide	4,4'-DDE	72-55-9	µg/kg	176	0	0.00%	1.8	11.1	340		16.1			0.00%	126,049		0.00%				0.00%	
Pesticide	4,4'-DDT	50-29-3	µg/kg	178	1	0.56%	19	11.3	19	P	16.1			0.00%	125,658		0.00%				0.00%	
Pesticide	Aldrin	309-00-2	µg/kg	178	1	0.56%	4.4	6.03	4.4		9.70			0.00%	2,024		0.00%				0.00%	
Pesticide	alpha-BHC	319-84-6	µg/kg	178	1	0.56%	3	5.97	3	P	9.70			0.00%	6,555		0.00%				0.00%	
Pesticide	alpha-Chlordane	5103-71-9	µg/kg	144	0	0.00%	1.8	61.8	1700		79.2			0.00%	117,997		0.00%				0.00%	
Pesticide	beta-BHC	319-85-7	µg/kg	178	0	0.00%	1.8	5.96	180		9.71			0.00%	22,942		0.00%				0.00%	
Pesticide	beta-Chlordane	5103-74-2	µg/kg	133	0	0.00%	1.8	62.8	1700		81.9			0.00%	117,997		0.00%				0.00%	
Pesticide	Chlordane		µg/kg	34	0	0.00%	18	44.5	1800		153			0.00%	117,997		0.00%				0.00%	
Pesticide	delta-BHC	319-86-8	µg/kg	178	1	0.56%	42	6.19	42	P	10.1			0.00%	6,555		0.00%				0.00%	
Pesticide	Dieldrin	60-57-1	µg/kg	176	1	0.57%	6.7	11.1	6.7	P	16.0			0.00%	2,151		0.00%				0.00%	
Pesticide	Endosulfan I	959-98-8	µg/kg	177	0	0.00%	1.8	5.99	180		9.73			0.00%	5.53E+06		0.00%				0.00%	
Pesticide	Endosulfan II	33213-65-9	µg/kg	175	1	0.57%	12	11.5	12	P	16.6			0.00%	5.53E+06		0.00%				0.00%	

Ra-228 adjusted for Subsurface Background Mean +2SD

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Table 6 Subsurface Soil Summary Statistics > 3.0 and ≤ 8.0 feet

6/28/2005

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
Pesticide	Endosulfan sulfate	1031-07-8	µg/kg	176	0	0.00%	1.8	11.1	340		16.1			0.00%	5.53E+06		0.00%				0.00%	
Pesticide	Endrin	72-20-8	µg/kg	176	0	0.00%	1.8	11.1	340		16.1			0.00%	276,495		0.00%				0.00%	
Pesticide	Endrin aldehyde	7421-93-4	µg/kg	49	1	2.04%	21	4.26	21	P	13.0			0.00%	276,495		0.00%				0.00%	
Pesticide	Endrin ketone	53494-70-5	µg/kg	143	1	0.70%	62	13.2	62	D	16.5			0.00%	383,250		0.00%				0.00%	
Pesticide	gamma-BHC (Lindane)	58-89-9	µg/kg	178	0	0.00%	1.8	5.96	180		9.71			0.00%	31,864		0.00%				0.00%	
Pesticide	gamma-Chlordane	12789-03-6	µg/kg	11	0	0.00%	1.9	51.0	180		36.7			0.00%	117,997		0.00%				0.00%	
Pesticide	Heptachlor	76-44-8	µg/kg	178	0	0.00%	1.8	5.96	180		9.71			0.00%	7,647		0.00%				0.00%	
Pesticide	Heptachlor epoxide	1024-57-3	µg/kg	178	1	0.56%	14	8.70	14	P	27.8			0.00%	3,782		0.00%				0.00%	
Pesticide	Hexachlorocyclopentadiene	77-47-4	µg/kg	541	0	0.00%	10	323	7700		210			0.00%	4.38E+06		0.00%				0.00%	
Pesticide	Methoxychlor	72-43-5	µg/kg	178	4	2.25%	0.26	52.2	22	P	74.9			0.00%	4.61E+06		0.00%				0.00%	
Pesticide	Toxaphene	8001-35-2	µg/kg	178	0	0.00%	87	197	18000		689			0.00%	31,284		0.00%				0.00%	
SVOC	1,2,4,5-Tetrachlorobenzene	95-94-3	µg/kg	31	0	0.00%	340	338	3600		425			0.00%	276,495		0.00%				0.00%	
SVOC	1,2,4-Trichlorobenzene	120-82-1	µg/kg	1496	50	3.34%	0.51	543	393000	E	10,871			0.00%	1.74E+06		0.00%				0.00%	
SVOC	1,2-Diphenylhydrazine	122-66-7	µg/kg	31	0	0.00%	340	338	3600		425			0.00%	43,021		0.00%				0.00%	
SVOC	2,4,5-Trichlorophenol	95-95-4	µg/kg	547	0	0.00%	51	666	8700		515			0.00%	9.22E+07		0.00%				0.00%	
SVOC	2,4,6-Trichlorophenol	88-06-2	µg/kg	547	0	0.00%	10	281	3900		163			0.00%	3.13E+06		0.00%				0.00%	
SVOC	2,4,6-Trinitrotoluene	118-96-7	µg/kg	3	0	0.00%	0.22	0.112	0.23		0.003			0.00%	460,825		0.00%				0.00%	
SVOC	2,4-Dichlorophenol	120-83-2	µg/kg	547	0	0.00%	10	281	3900		163			0.00%	2.76E+06		0.00%				0.00%	
SVOC	2,4-Dimethylphenol	105-67-9	µg/kg	547	2	0.37%	81	280	89	J	164			0.00%	1.84E+07		0.00%				0.00%	
SVOC	2,4-Dinitrophenol	51-28-5	µg/kg	534	0	0.00%	51	1,346	19000		823			0.00%	1.84E+06		0.00%				0.00%	
SVOC	2,4-Dinitrotoluene	121-14-2	µg/kg	549	1	0.18%	43	283	43	J	175			0.00%	1.84E+06		0.00%				0.00%	
SVOC	2,6-Dinitrotoluene	606-20-2	µg/kg	549	0	0.00%	10	281	3900		163			0.00%	921,651		0.00%				0.00%	
SVOC	2-Chloronaphthalene	91-58-7	µg/kg	549	0	0.00%	10	281	3900		163			0.00%	7.37E+07		0.00%				0.00%	
SVOC	2-Chlorophenol	95-57-8	µg/kg	547	2	0.37%	10	280	77	J	164			0.00%	6.39E+06		0.00%				0.00%	
SVOC	2-Methylnaphthalene	91-57-6	µg/kg	550	24	4.36%	10	281	1300		180			0.00%	3.69E+06		0.00%				0.00%	
SVOC	2-Methylphenol	95-48-7	µg/kg	546	1	0.18%	93	281	93	J	163			0.00%	4.61E+07		0.00%				0.00%	
SVOC	2-Nitroaniline	88-74-4	µg/kg	549	0	0.00%	51	1,335	19000		819			0.00%	2.21E+06		0.00%				0.00%	
SVOC	3,3'-Dichlorobenzidine	91-94-1	µg/kg	544	2	0.37%	160	617	160	J	421			0.00%	76,667		0.00%				0.00%	
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	µg/kg	546	0	0.00%	51	1,443	36000		1,282			0.00%	92,165		0.00%				0.00%	
SVOC	4-Chloroaniline	106-47-8	µg/kg	537	0	0.00%	10	415	7300		345			0.00%	3.69E+06		0.00%				0.00%	
SVOC	4-Methylphenol	106-44-5	µg/kg	539	4	0.74%	130	278	300	J	162			0.00%	4.61E+06		0.00%				0.00%	
SVOC	4-Nitroaniline	100-01-6	µg/kg	535	1	0.19%	230	1,437	230	J	1,299			0.00%	2.39E+06		0.00%				0.00%	
SVOC	Acenaphthene	83-32-9	µg/kg	552	46	8.33%	40	247	3600	D	302			0.00%	5.10E+07		0.00%				0.00%	
SVOC	Anthracene	120-12-7	µg/kg	552	50	9.06%	45	271	7300		507			0.00%	2.55E+08		0.00%				0.00%	
SVOC	Benzidine	92-87-5	µg/kg	1	0	0.00%	360	180	360					0.00%	150		0.00%				0.00%	
SVOC	Benzo(a)anthracene	56-55-3	µg/kg	549	89	16.21%	21	330	8000		661			0.00%	43,616		0.00%				0.00%	
SVOC	Benzo(b)fluoranthene	205-99-2	µg/kg	547	73	13.35%	8.1	329	7100		542			0.00%	43,616		0.00%				0.00%	
SVOC	Benzo(k)fluoranthene	207-08-9	µg/kg	547	59	10.79%	11.9	317	8000		517			0.00%	436,159		0.00%				0.00%	
SVOC	Benzoic Acid	65-85-0	µg/kg	508	34	6.69%	48	1,314	2300	J	863			0.00%	3.69E+09		0.00%				0.00%	
SVOC	Benzyl Alcohol	100-51-6	µg/kg	510	0	0.00%	10	421	7300		348			0.00%	2.76E+08		0.00%				0.00%	
SVOC	bis(2-Chloroethyl) ether	111-44-4	µg/kg	549	0	0.00%	10	281	3900		163			0.00%	43,315		0.00%				0.00%	
SVOC	bis(2-Chloroisopropyl) ether	108-60-1	µg/kg	545	0	0.00%	10	282	3900		163			0.00%	681,967		0.00%				0.00%	
SVOC	bis(2-ethylhexyl)phthalate	117-81-7	µg/kg	551	126	22.87%	27	491	71000	E	3,643			0.00%	2.46E+06		0.00%				0.00%	
SVOC	Butylbenzylphthalate	85-68-7	µg/kg	550	33	6.00%	23	305	6000		382			0.00%	1.84E+08		0.00%				0.00%	
SVOC	Carbazole	86-74-8	µg/kg	26	2	7.69%	410	285	1300		223			0.00%	1.73E+06		0.00%				0.00%	
SVOC	Chrysene	218-01-9	µg/kg	551	106	19.24%	24	334	8500		682			0.00%	4.36E+06		0.00%				0.00%	
SVOC	Dibenz(a,h)anthracene	53-70-3	µg/kg	549	26	4.74%	13.6	283	1700		189			0.00%	4,362		0.00%				0.00%	
SVOC	Dibenzofuran	132-64-9	µg/kg	546	21	3.85%	10	286	2300		214			0.00%	2.56E+06		0.00%				0.00%	
SVOC	Diethylphthalate	84-66-2	µg/kg	549	12	2.19%	20	317	250	J	211			0.00%	7.37E+08		0.00%				0.00%	
SVOC	Dimethylphthalate	131-11-3	µg/kg	549	1	0.18%	140	281	140	J	163			0.00%	9.22E+09		0.00%				0.00%	
SVOC	Di-n-butylphthalate	84-74-2	µg/kg	549	56	10.20%	19	285	3600		243			0.00%	9.22E+07		0.00%				0.00%	
SVOC	Di-n-octylphthalate	117-84-0	µg/kg	549	4	0.73%	20.9	280	72	J	164			0.00%	3.69E+07		0.00%				0.00%	
SVOC	Fluoranthene	206-44-0	µg/kg	551	124	22.50%	5.8	492	31000		2,046			0.00%	3.40E+07		0.00%				0.00%	
SVOC	Fluorene	86-73-7	µg/kg	552	33	5.98%	39	299	4500		323			0.00%	3.69E+07		0.00%				0.00%	

Ra-228 adjusted for Subsurface Background Mean +2SD

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Table 6 Subsurface Soil Summary Statistics > 3.0 and ≤ 8.0 feet

7/28/2005

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results>= 10xPRG	Percent >= 10xPRG	>= 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results > PRG	Percent >= PRG	Eliminated By Process Knowledge				
SVOC	Hexachlorobenzene	118-74-1	µg/kg	549	2	0.36%	30	280	160	J	163			0.00%	21,508		0.00%				0.00%	
SVOC	Hexachlorobutadiene	87-68-3	µg/kg	1496	9	0.60%	0.64	89.1	310	JE	388			0.00%	255,500		0.00%				0.00%	
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	551	56	10.16%	9.4	295	3800		287			0.00%	43,616		0.00%				0.00%	
SVOC	Isophorone	78-59-1	µg/kg	549	0	0.00%	10	281	3900		163			0.00%	3.63E+07		0.00%				0.00%	
SVOC	Naphthalene	91-20-3	µg/kg	1497	186	12.42%	0.35	144	19000	E	890			0.00%	1.61E+07		0.00%				0.00%	
SVOC	Nitrobenzene	98-95-3	µg/kg	549	0	0.00%	10	281	3900		163			0.00%	497,333		0.00%				0.00%	
SVOC	N-Nitrosodiethylamine	55-18-5	µg/kg	31	0	0.00%	680	681	7300		861			0.00%	229		0.00%				0.00%	
SVOC	N-Nitrosodimethylamine	62-75-9	µg/kg	31	0	0.00%	680	681	7300		861			0.00%	675		0.00%				0.00%	
SVOC	N-Nitrosodi-n-butylamine	924-16-3	µg/kg	31	0	0.00%	340	338	3600		425			0.00%	5,977		0.00%				0.00%	
SVOC	N-Nitroso-di-n-propylamine	621-64-7	µg/kg	549	1	0.18%	450	282	450		163			0.00%	4,929		0.00%				0.00%	
SVOC	N-nitrosodiphenylamine	86-30-6	µg/kg	541	2	0.37%	220	278	250	J	162			0.00%	7.04E+06		0.00%				0.00%	
SVOC	Pentachlorobenzene	608-93-5	µg/kg	31	0	0.00%	340	338	3600		425			0.00%	737,321		0.00%				0.00%	
SVOC	Pentachlorophenol	87-86-5	µg/kg	547	3	0.55%	250	1,343	790	J	818			0.00%	202,777		0.00%				0.00%	
SVOC	Phenol	108-95-2	µg/kg	549	31	5.65%	30	299	2500		221			0.00%	2.76E+08		0.00%				0.00%	
SVOC	Pyrene	129-00-0	µg/kg	551	122	22.14%	10	473	26000		1,752			0.00%	2.55E+07		0.00%				0.00%	
VOC	1,1,1,2-Tetrachloroethane	630-20-6	µg/kg	1209	0	0.00%	0.497	49.6	12850		373			0.00%	1.05E+06		0.00%				0.00%	
VOC	1,1,1-Trichloroethane	71-55-6	µg/kg	1846	61	3.30%	0.2	794	690000	E	17,612			0.00%	1.06E+08		0.00%				0.00%	
VOC	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	1844	5	0.27%	22	41.8	1000	JN	323			0.00%	120,551		0.00%				0.00%	
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	µg/kg	1210	7	0.58%	0.8	94.1	390		921			0.00%	2.74E+10		0.00%				0.00%	
VOC	1,1,2-Trichloroethane	79-00-5	µg/kg	1847	5	0.27%	0.25	42.6	9.9		345			0.00%	322,253		0.00%				0.00%	
VOC	1,1-Dichloroethane	75-34-3	µg/kg	1848	7	0.38%	0.18	39.5	29		320			0.00%	3.12E+07		0.00%				0.00%	
VOC	1,1-Dichloroethene	75-35-4	µg/kg	1847	13	0.70%	0.47	53.0	640		550			0.00%	199,706		0.00%				0.00%	
VOC	1,2,3-Trichloropropane	96-18-4	µg/kg	1210	1	0.08%	72	67.6	72		600			0.00%	23,910		0.00%				0.00%	
VOC	1,2-Dibromo-3-chloropropane	96-12-8	µg/kg	1210	0	0.00%	1.355	146	103000		1,831			0.00%	34,137		0.00%				0.00%	
VOC	1,2-Dibromoethane	106-93-4	µg/kg	1210	0	0.00%	0.497	54.3	17900		433			0.00%	403		0.00%				0.00%	
VOC	1,2-Dichlorobenzene	95-50-1	µg/kg	1501	8	0.53%	0.12	82.9	270	BJ	333			0.00%	3.32E+07		0.00%				0.00%	
VOC	1,2-Dichloroethane	107-06-2	µg/kg	1839	13	0.71%	1	42.5	39		376			0.00%	152,603		0.00%				0.00%	
VOC	1,2-Dichloroethene	540-59-0	µg/kg	583	3	0.51%	5	9.84	32		51.3			0.00%	1.15E+07		0.00%				0.00%	
VOC	1,2-Dichloropropane	78-87-5	µg/kg	1847	3	0.16%	1	36.7	3.4	J	281			0.00%	441,907		0.00%				0.00%	
VOC	1,3-Dichlorobenzene	541-73-1	µg/kg	1512	7	0.46%	0.72	85.8	70	J	346			0.00%	3.83E+07		0.00%				0.00%	
VOC	1,4-Dichlorobenzene	106-46-7	µg/kg	1501	16	1.07%	0.25	96.4	240		512			0.00%	1.05E+06		0.00%				0.00%	
VOC	2-Butanone	78-93-3	µg/kg	1732	127	7.33%	2	769	8100	JB	10,161			0.00%	5.33E+08		0.00%				0.00%	
VOC	4-Methyl-2-pentanone	108-10-1	µg/kg	1815	17	0.94%	2	316	850	J	3,469			0.00%	9.57E+08		0.00%				0.00%	
VOC	Acetone	67-64-1	µg/kg	1787	477	26.69%	1	1,100	17000		16,443			0.00%	1.15E+09		0.00%				0.00%	
VOC	Benzene	71-43-2	µg/kg	1850	11	0.59%	0.47	38.9	100	J	315			0.00%	270,977		0.00%				0.00%	
VOC	Bromodichloromethane	75-27-4	µg/kg	1847	1	0.05%	0.29	38.6	0.29	J	303			0.00%	771,304		0.00%				0.00%	
VOC	Bromoform	75-25-2	µg/kg	1838	1	0.05%	2	46.8	2	J	445			0.00%	4.83E+06		0.00%				0.00%	
VOC	Bromomethane	74-83-9	µg/kg	1801	1	0.06%	7450	86.4	7450	JD	959			0.00%	241,033		0.00%				0.00%	
VOC	Carbon Disulfide	75-15-0	µg/kg	1843	12	0.65%	0.37	55.9	160	J	494			0.00%	1.88E+07		0.00%				0.00%	
VOC	Carbon Tetrachloride	56-23-5	µg/kg	1844	42	2.28%	0.31	86.5	56000	E	1,398			0.00%	97,124		0.00%				0.00%	
VOC	Chlorobenzene	108-90-7	µg/kg	1847	2	0.11%	2.1	37.1	24	J	288			0.00%	7.67E+06		0.00%				0.00%	
VOC	Chloroethane	75-00-3	µg/kg	1814	0	0.00%	0.847	72.6	37300		709			0.00%	1.65E+07		0.00%				0.00%	
VOC	Chloroform	67-66-3	µg/kg	1847	52	2.82%	0.095	61.5	17000	JE	620			0.00%	90,270		0.00%				0.00%	
VOC	Chloromethane	74-87-3	µg/kg	1838	3	0.16%	1.8	72.3	86	J	740			0.00%	1.32E+06		0.00%				0.00%	
VOC	cis-1,3-Dichloropropene	10061-01-5	µg/kg	1848	0	0.00%	0.497	38.8	12850		302			0.00%	223,462		0.00%				0.00%	
VOC	Dibromochloromethane	124-48-1	µg/kg	1848	0	0.00%	0.497	41.0	16700		341			0.00%	569,296		0.00%				0.00%	
VOC	Dichlorodifluoromethane	75-71-8	µg/kg	1176	2	0.17%	9.71	195	10.8		2,629			0.00%	2.64E+06		0.00%				0.00%	
VOC	ethyl acetate	141-78-6	µg/kg	1	1	100.00%	1000	1,000	1000	JN				0.00%	1.15E+09		0.00%				0.00%	
VOC	Ethylbenzene	100-41-4	µg/kg	1851	37	2.00%	0.4	48.0	15500	E	475			0.00%	6.19E+07		0.00%				0.00%	
VOC	Hexachloroethane	67-72-1	µg/kg	549	0	0.00%	10	281	3900		163			0.00%	1.28E+06		0.00%				0.00%	
VOC	Isopropylbenzene	98-82-8	µg/kg	1209	14	1.16%	0.27	50.9	2500	JE	381			0.00%	375,823		0.00%				0.00%	
VOC	m,p-Xylene		µg/kg	9	0	0.00%	6	3.00	6		0.00E+00			0.00%	1.22E+07		0.00%				0.00%	
VOC	Methylene Chloride	75-09-2	µg/kg	1845	440	23.85%	0.8	48.4	1500	B	353			0.00%	3.13E+06		0.00%				0.00%	
VOC	o-Xylene	95-47-6	µg/kg	24	0	0.00%	6	182	620		155			0.00%	1.22E+07		0.00%				0.00%	

Ra-228 adjusted for Subsurface Background Mean +2SD

Table 6 Subsurface Soil Summary Statistics > 3.0 and ≤ 8.0 feet

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
VOC	Styrene	100-42-5	µg/kg	1848	5	0.27%	0.086	40.6	25.7		336			0.00%	1.59E+08		0.00%				0.00%	
VOC	Toluene	108-88-3	µg/kg	1850	515	27.84%	0.12	71.7	20000	E	600			0.00%	3.56E+07		0.00%				0.00%	
VOC	trans-1,3-Dichloropropene	10061-02-6	µg/kg	1843	0	0.00%	0.497	40.6	16100		336			0.00%	239,434		0.00%				0.00%	
VOC	Trichlorofluoromethane	75-69-4	µg/kg	1209	12	0.99%	0.48	107	15	J	1,158			0.00%	1.74E+07		0.00%				0.00%	
VOC	Vinyl acetate	108-05-4	µg/kg	538	0	0.00%	10	27.9	7400		226			0.00%	3.04E+07		0.00%				0.00%	
VOC	Vinyl Chloride	75-01-4	µg/kg	1848	0	0.00%	0.886	76.7	45900		762			0.00%	24,948		0.00%				0.00%	
VOC	Xylene	1330-20-7	µg/kg	1842	61	3.31%	0.11	124	115000	E	2,774			0.00%	1.22E+07		0.00%				0.00%	
Radionuclide	Cesium-134	13967-70-9	pCi/g	75	69	92.00%	-0.103	0.028	0.11		0.056			0.00%	0.910		0.00%				0.00%	
Radionuclide	Cesium-137	10045-97-3	pCi/g	160	144	90.00%	-0.0322	0.044	0.573		0.081	0.143	7	4.38%	2.54		0.00%				0.00%	
Radionuclide	Curium-244	13981-15-2	pCi/g	16	10	62.50%	0.0114	0.055	0.4618		0.109			0.00%	99.3		0.00%				0.00%	
Radionuclide	Neptunium-237	13994-20-2	pCi/g	1	1	100.00%	0.003078	0.003	0.003078	J				0.00%	62.5		0.00%				0.00%	
Radionuclide	Plutonium-238	13981-16-3	pCi/g	79	60	75.95%	-0.00971	0.534	19.84		2.72			0.00%	68.7		0.00%				0.00%	
Radionuclide	Plutonium-241	14119-32-5	pCi/g	4	3	75.00%	73.1	98.0	178		69.0			0.00%	5,981		0.00%				0.00%	
Radionuclide	Radium-226	13982-63-3	pCi/g	118	114	96.61%	-0.367	1.00	6.838	X	0.841	1.34	17	14.41%	31.0		0.00%				0.00%	
Radionuclide	Strontium-89/90		pCi/g	203	161	79.31%	-0.42	0.197	1.31		0.239	0.570	15	7.39%	152		0.00%				0.00%	
Radionuclide	Tritium	10028-17-8	pCi/g	6	6	100.00%	98	263	455		156			0.00%	288,449		0.00%				0.00%	
Radionuclide	Uranium-233/234		pCi/g	893	875	97.98%	0.04465	2.26	288.286896		12.8	2.08	72	8.06%	291		0.00%				0.00%	
Metal	Lead	7439-92-1	mg/kg	1405	1402	99.79%	0.49	17.5	5200		144	26.5	58	4.13%	1000*	1	0.07%	No	Lead		0.00%	
Metal	Arsenic	7440-38-2	mg/kg	1400	1379	98.50%	0.46	5.48	55.1		4.24	17.5	28	2.00%	27.7	4	0.29%	No	Arsenic		0.00%	
Metal	Chromium (total)	7440-47-3	mg/kg	1400	1390	99.29%	1.2	28.2	11000		319	42.2	43	3.07%	327	4	0.29%	No	Chromium (total)	2	0.14%	Chromium (total)
Radionuclide	Uranium-235	15117-96-1	pCi/g	893	550	61.59%	-0.0149	0.188	36.1168604		1.55	0.162	60	6.72%	12.1	3	0.34%	No	Uranium-235		0.00%	
Radionuclide	Americium-241	86954-36-1	pCi/g	862	511	59.28%	-0.00291	1.65	410		16.6	0.010	327	37.94%	88.4	3	0.35%	No	Americium-241		0.00%	
Radionuclide	Uranium-238	7440-61-1	pCi/g	893	885	99.10%	0.143	5.53	1130		55.5	1.77	79	8.85%	337	4	0.45%	No	Uranium-238		0.00%	
VOC	Trichloroethene	79-01-6	µg/kg	1844	150	8.13%	0.27	3,401	3700000	E	92,522			0.00%	20,354	10	0.54%	No	Trichloroethene	2	0.11%	Trichloroethene
PCB	PCB-1260	11096-82-5	µg/kg	486	64	13.17%	6.6	967	100000		6,087			0.00%	15,514	4	0.82%	No	PCB-1260		0.00%	
SVOC	Benzo(a)pyrene	50-32-8	µg/kg	548	75	13.69%	5.7	345	11000		743			0.00%	4,357	5	0.91%	No	Benzo(a)pyrene		0.00%	
Radionuclide	Plutonium-239/240		pCi/g	874	582	66.59%	-0.0302	8.76	2450		102	0.022	361	41.30%	112	9	1.03%	No	Plutonium-239/240	2	0.23%	Plutonium-239/240
VOC	Tetrachloroethene	127-18-4	µg/kg	1849	247	13.36%	0.35	28,863	27000000	E	685,138			0.00%	77,111	23	1.24%	No	Tetrachloroethene	10	0.54%	Tetrachloroethene
PCB	PCB-1254	11097-69-1	µg/kg	483	105	21.74%	6.2	1,432	170000		9,825			0.00%	15,514	8	1.66%	No	PCB-1254	1	0.21%	PCB-1254
Radionuclide	Radium-228	15262-20-1	pCi/g	147	146	99.32%	0	1.43	2.784		0.534	2.09	20	13.61%	1.28	20	13.61%	Yes			0.00%	

*The PRG value for lead is not calculated, but rather is taken from EPA's "Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities (1994)".

	The frequency of detection of the analyte concentration above the PRG is greater than (>) 0% and less than (<) 1%
	The frequency of detection of the analyte concentration above the PRG is greater than or equal to (≥) 1% and less than (<) 5%
	The frequency of detection of the analyte concentration above the PRG is greater than or equal to (≥) 5%

Notes:

Chromium (total) is conservatively compared with the Chromium VI PRG.

A Key to laboratory qualifier codes is provided in Table 11.

For analytes with no detections (Percent Detection Frequency = 0%), the Minimum and Maximum Concentration columns contain the minimum and maximum non-detection values.

The Mean Concentration and Standard Deviation columns are calculated based on one-half of all the non-detected values for the analyte, except for radionuclides where all results are used.

The PCBs identfied above under the Standard Name Column are equivalent to Aroclors, for example PCB-1254 is the same as Aroclor-1254.

For radium-228 the Subsurface Background Mean + 2SD value is greater than the WRW PRG. Therefore, only those results greater than both the Subsurface Background Mean +2SD and WRW PRG are reported under AOI Screen 2.

Ra-228 adjusted for Subsurface Background Mean +2SD

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Table 7 Subsurface Soil Summary Statistics > 8.0 and ≤ 12.0 feet

6/28/2005

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
Metal	Aluminum	7429-90-5	mg/kg	567	565	99.65%	463	11,169	42400	E	6,458	30,392	9	1.59%	284,902		0.00%				0.00%	
Metal	Antimony	7440-36-0	mg/kg	531	75	14.12%	0.27	3.30	149		7.73	9.78	22	4.14%	511		0.00%				0.00%	
Metal	Barium	7440-39-3	mg/kg	569	567	99.65%	12.2	94.3	1150		97.8	291	17	2.99%	33,033		0.00%				0.00%	
Metal	Beryllium	7440-41-7	mg/kg	563	430	76.38%	0.12	1.47	190		10.6	15.8	2	0.36%	1,151		0.00%				0.00%	
Metal	Boron	7440-42-8	mg/kg	223	171	76.68%	0.51	3.16	96		6.80			0.00%	108,980		0.00%				0.00%	
Metal	Cadmium	7440-43-9	mg/kg	553	103	18.63%	0.05	1.16	160		8.86	1.08	31	5.61%	1,051		0.00%				0.00%	
Metal	Chromium VI		mg/kg	4	1	25.00%	0.56	0.375	0.56		0.124			0.00%	327		0.00%				0.00%	
Metal	Cobalt	7440-48-4	mg/kg	566	546	96.47%	0.69	6.16	97.3		6.12	15.4	13	2.30%	1,401		0.00%				0.00%	
Metal	Copper	7440-50-8	mg/kg	567	555	97.88%	1.6	20.4	1380		81.6	23.8	44	7.76%	51,100		0.00%				0.00%	
Metal	Iron	7439-89-6	mg/kg	567	566	99.82%	2180	13,222	107000		8,714	28,459	13	2.29%	383,250		0.00%				0.00%	
Metal	Lead	7439-92-1	mg/kg	569	568	99.82%	1.1	14.5	935		56.0	26.5	16	2.81%	1000*		0.00%				0.00%	
Metal	Lithium	7439-93-2	mg/kg	553	501	90.60%	1.4	8.41	97.4		7.23	20.5	20	3.62%	25,550		0.00%				0.00%	
Metal	Manganese	7439-96-5	mg/kg	568	566	99.65%	14.3	181	3140		214	487	30	5.28%	4,815		0.00%				0.00%	
Metal	Mercury	7439-97-6	mg/kg	541	263	48.61%	0.0015	0.088	19		0.816	0.488	1	0.18%	379		0.00%				0.00%	
Metal	Molybdenum	7439-98-7	mg/kg	560	218	38.93%	0.14	2.15	190		10.5	29.1	3	0.54%	6,388		0.00%				0.00%	
Metal	Nickel	7440-02-0	mg/kg	568	546	96.13%	1.4	26.7	4750		207	43.0	19	3.35%	25,550		0.00%				0.00%	
Metal	Selenium	7782-49-2	mg/kg	562	53	9.43%	0.15	0.417	54.4		2.30	1.68	4	0.71%	6,388		0.00%				0.00%	
Metal	Silver	7440-22-4	mg/kg	560	82	14.64%	0.075	1.77	311		16.2	26.6	4	0.71%	6,388		0.00%				0.00%	
Metal	Strontium	7440-24-6	mg/kg	566	562	99.29%	5.5	44.9	398		41.0	136	19	3.36%	766,500		0.00%				0.00%	
Metal	Thallium	7440-28-0	mg/kg	564	125	22.16%	0.2	0.543	85.2		3.59	1.42	14	2.48%	89.4		0.00%				0.00%	
Metal	Tin	7440-31-5	mg/kg	556	83	14.93%	0.49	6.44	579		30.6	354	2	0.36%	766,500		0.00%				0.00%	
Metal	Titanium	7440-32-6	mg/kg	223	223	100.00%	21	134	440		80.2			0.00%	1.95E+06		0.00%				0.00%	
Metal	Uranium (total)		mg/kg	232	41	17.67%	1.4	2.26	110		8.20	3.04	21	9.05%	3,833		0.00%				0.00%	
Metal	Vanadium	7440-62-2	mg/kg	568	566	99.65%	4	27.1	118		14.4	63.3	11	1.94%	1,278		0.00%				0.00%	
Metal	Zinc	7440-66-6	mg/kg	568	563	99.12%	3.7	41.8	1870		105	78.3	28	4.93%	383,250		0.00%				0.00%	
Wet Chem	Ammonia	7664-41-7	mg/kg	14	1	7.14%	0.445	0.192	0.445		0.073			0.00%	1.05E+07		0.00%				0.00%	
Wet Chem	Cyanide	57-12-5	mg/kg	69	2	2.90%	0.52	0.665	0.525		0.529			0.00%	25,550		0.00%				0.00%	
Wet Chem	Fluoride	16984-48-8	mg/kg	7	7	100.00%	0.18	0.724	1.62		0.531			0.00%	76,650		0.00%				0.00%	
Wet Chem	Nitrate / Nitrite	ConID 184	mg/kg	107	83	77.57%	0.03	41.1	1050		138	4.33	29	27.10%	2.04E+06		0.00%				0.00%	
Wet Chem	Nitrite	ConID 187	mg/kg	2	0	0.00%	5.3	2.70	5.5		0.071			0.00%	127,750		0.00%				0.00%	
Dioxins/Furans	123478-HxCDD	39227-28-6	mg/kg	3	0	0.00%	0.00128	6.68E-04	0.00138		2.57E-05			0.00%	5.55		0.00%				0.00%	
Dioxins/Furans	123678-HxCDD	57653-85-7	mg/kg	3	1	33.33%	0.0352	0.012	0.0352		0.020			0.00%	5.55		0.00%				0.00%	
Dioxins/Furans	123789-HxCDD	19408-74-3	mg/kg	3	1	33.33%	0.0151	0.005	0.0151		0.008			0.00%	5.55		0.00%				0.00%	
Dioxins/Furans	2378-TCDD	1746-01-6	mg/kg	3	0	0.00%	0.000514	2.67E-04	0.00055		9.29E-06			0.00%	0.285		0.00%				0.00%	
Explosive	HMX	2691-41-0	mg/kg	1	0	0.00%	250	125	250					0.00%	4.61E+07		0.00%				0.00%	
Herbicide	4-Nitrophenol	100-02-7	mg/kg	268	0	0.00%	390	1,731	190000		5,949			0.00%	7.37E+06		0.00%				0.00%	
PCB	PCB-1221	11104-28-2	mg/kg	197	0	0.00%	33	385	32000		1,872			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1232	11141-16-5	mg/kg	195	0	0.00%	33	388	32000		1,882			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1242	53469-21-9	mg/kg	197	0	0.00%	33	384	32000		1,872			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1248	12672-29-6	mg/kg	197	0	0.00%	33	384	32000		1,872			0.00%	15,514		0.00%				0.00%	
Pesticide	4,4'-DDD	72-54-8	mg/kg	99	0	0.00%	1.7	10.2	43		6.43			0.00%	178,570		0.00%				0.00%	
Pesticide	4,4'-DDE	72-55-9	mg/kg	99	0	0.00%	1.7	10.2	43		6.43			0.00%	126,049		0.00%				0.00%	
Pesticide	4,4'-DDT	50-29-3	mg/kg	99	0	0.00%	1.7	10.2	43		6.43			0.00%	125,658		0.00%				0.00%	
Pesticide	Aldrin	309-00-2	mg/kg	99	0	0.00%	1.7	5.20	22		3.14			0.00%	2,024		0.00%				0.00%	
Pesticide	alpha-BHC	319-84-6	mg/kg	99	1	1.01%	15	5.30	15		3.29			0.00%	6,555		0.00%				0.00%	
Pesticide	alpha-Chlordane	5103-71-9	mg/kg	85	0	0.00%	1.8	58.7	220		29.1			0.00%	117,997		0.00%				0.00%	
Pesticide	beta-BHC	319-85-7	mg/kg	99	0	0.00%	1.7	5.20	22		3.14			0.00%	22,942		0.00%				0.00%	
Pesticide	beta-Chlordane	5103-74-2	mg/kg	79	0	0.00%	1.8	57.8	200		29.1			0.00%	117,997		0.00%				0.00%	
Pesticide	Chlordane		mg/kg	15	0	0.00%	17	9.47	21		0.481			0.00%	117,997		0.00%				0.00%	
Pesticide	delta-BHC	319-86-8	mg/kg	99	0	0.00%	1.7	5.20	22		3.14			0.00%	6,555		0.00%				0.00%	
Pesticide	Dieldrin	60-57-1	mg/kg	98	0	0.00%	1.7	10.2	43		6.46			0.00%	2,151		0.00%				0.00%	
Pesticide	Endosulfan I	959-98-8	mg/kg	99	0	0.00%	1.7	5.20	22		3.14			0.00%	5.53E+06		0.00%				0.00%	
Pesticide	Endosulfan II	33213-65-9	mg/kg	98	0	0.00%	1.7	10.2	43		6.46			0.00%	5.53E+06		0.00%				0.00%	
Pesticide	Endosulfan sulfate	1031-07-8	mg/kg	98	0	0.00%	1.7	10.2	43		6.46			0.00%	5.53E+06		0.00%				0.00%	

*The PRG value for lead is not calculated, but rather is taken from EPA's "Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities (1994)".

Ra-228 adjusted for Subsurface Background Mean +2SD

Table 7 Subsurface Soil Summary Statistics > 8.0 and ≤ 12.0 feet

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results > PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
Pesticide	Endrin	72-20-8	mg/kg	98	0	0.00%	1.7	10.2	43		6.46			0.00%	276,495		0.00%				0.00%	
Pesticide	Endrin aldehyde	7421-93-4	mg/kg	22	0	0.00%	1.7	1.26	4.2		0.470			0.00%	276,495		0.00%				0.00%	
Pesticide	Endrin ketone	53494-70-5	mg/kg	86	0	0.00%	1.8	11.6	43		5.71			0.00%	383,250		0.00%				0.00%	
Pesticide	gamma-BHC (Lindane)	58-89-9	mg/kg	99	0	0.00%	1.7	5.20	22		3.14			0.00%	31,864		0.00%				0.00%	
Pesticide	gamma-Chlordane	12789-03-6	mg/kg	5	0	0.00%	87	74.4	220		29.7			0.00%	117,997		0.00%				0.00%	
Pesticide	Heptachlor	76-44-8	mg/kg	99	0	0.00%	1.7	5.20	22		3.14			0.00%	7,647		0.00%				0.00%	
Pesticide	Heptachlor epoxide	1024-57-3	mg/kg	99	1	1.01%	11	5.69	11		2.74			0.00%	3,782		0.00%				0.00%	
Pesticide	Hexachlorocyclopentadiene	77-47-4	mg/kg	264	0	0.00%	340	393	38000		1,198			0.00%	4.38E+06		0.00%				0.00%	
Pesticide	Methoxychlor	72-43-5	mg/kg	99	1	1.01%	0.47	50.4	0.47	J	33.3			0.00%	4.61E+06		0.00%				0.00%	
Pesticide	Toxaphene	8001-35-2	mg/kg	99	0	0.00%	86	121	430		44.7			0.00%	31,284		0.00%				0.00%	
SVOC	1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	29	0	0.00%	340	411	7100		730			0.00%	276,495		0.00%				0.00%	
SVOC	1,2,4-Trichlorobenzene	120-82-1	mg/kg	697	20	2.87%	0.32	292	2400		1,891			0.00%	1.74E+06		0.00%				0.00%	
SVOC	1,2-Diphenylhydrazine	122-66-7	mg/kg	29	0	0.00%	340	411	7100		730			0.00%	43,021		0.00%				0.00%	
SVOC	2,4,5-Trichlorophenol	95-95-4	mg/kg	269	0	0.00%	330	1,142	190000		5,873			0.00%	9.22E+07		0.00%				0.00%	
SVOC	2,4,6-Trichlorophenol	88-06-2	mg/kg	269	0	0.00%	330	357	38000		1,190			0.00%	3.13E+06		0.00%				0.00%	
SVOC	2,4,6-Trinitrotoluene	118-96-7	mg/kg	1	0	0.00%	250	125	250					0.00%	460,825		0.00%				0.00%	
SVOC	2,4-Dichlorophenol	120-83-2	mg/kg	269	0	0.00%	330	357	38000		1,190			0.00%	2.76E+06		0.00%				0.00%	
SVOC	2,4-Dimethylphenol	105-67-9	mg/kg	269	0	0.00%	330	357	38000		1,190			0.00%	1.84E+07		0.00%				0.00%	
SVOC	2,4-Dinitrophenol	51-28-5	mg/kg	260	0	0.00%	880	1,747	190000		6,038			0.00%	1.84E+06		0.00%				0.00%	
SVOC	2,4-Dinitrotoluene	121-14-2	mg/kg	271	0	0.00%	250	355	38000		1,186			0.00%	1.84E+06		0.00%				0.00%	
SVOC	2,6-Dinitrotoluene	606-20-2	mg/kg	271	0	0.00%	250	355	38000		1,186			0.00%	921,651		0.00%				0.00%	
SVOC	2-Chloronaphthalene	91-58-7	mg/kg	270	0	0.00%	330	356	38000		1,188			0.00%	7.37E+07		0.00%				0.00%	
SVOC	2-Chlorophenol	95-57-8	mg/kg	269	2	0.74%	44	356	46	J	1,190			0.00%	6.39E+06		0.00%				0.00%	
SVOC	2-Methylnaphthalene	91-57-6	mg/kg	268	9	3.36%	57	481	26000		1,990			0.00%	3.69E+06		0.00%				0.00%	
SVOC	2-Methylphenol	95-48-7	mg/kg	267	1	0.37%	74	357	74	J	1,195			0.00%	4.61E+07		0.00%				0.00%	
SVOC	2-Nitroaniline	88-74-4	mg/kg	270	0	0.00%	830	1,719	190000		5,927			0.00%	2.21E+06		0.00%				0.00%	
SVOC	3,3'-Dichlorobenzidine	91-94-1	mg/kg	267	0	0.00%	350	696	38000		1,306			0.00%	76,667		0.00%				0.00%	
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	269	0	0.00%	880	1,964	190000		6,332			0.00%	92,165		0.00%				0.00%	
SVOC	4-Chloroaniline	106-47-8	mg/kg	260	0	0.00%	330	475	38000		1,294			0.00%	3.69E+06		0.00%				0.00%	
SVOC	4-Methylphenol	106-44-5	mg/kg	269	5	1.86%	61	393	9300		1,311			0.00%	4.61E+06		0.00%				0.00%	
SVOC	4-Nitroaniline	100-01-6	mg/kg	258	0	0.00%	830	1,976	190000		6,465			0.00%	2.39E+06		0.00%				0.00%	
SVOC	4-Nitrotoluene	99-99-0	mg/kg	1	0	0.00%	250	125	250					0.00%	2.81E+06		0.00%				0.00%	
SVOC	Acenaphthene	83-32-9	mg/kg	270	16	5.93%	50	476	31000		2,464			0.00%	5.10E+07		0.00%				0.00%	
SVOC	Anthracene	120-12-7	mg/kg	270	17	6.30%	44	565	46000		3,580			0.00%	2.55E+08		0.00%				0.00%	
SVOC	Benzo(k)fluoranthene	207-08-9	mg/kg	268	11	4.10%	50	423	19000		1,539			0.00%	436,159		0.00%				0.00%	
SVOC	Benzoic Acid	65-85-0	mg/kg	248	22	8.87%	42	1,762	3400	J	6,188			0.00%	3.69E+09		0.00%				0.00%	
SVOC	Benzyl Alcohol	100-51-6	mg/kg	250	0	0.00%	330	490	38000		1,318			0.00%	2.76E+08		0.00%				0.00%	
SVOC	bis(2-Chloroethyl) ether	111-44-4	mg/kg	270	0	0.00%	330	356	38000		1,188			0.00%	43,315		0.00%				0.00%	
SVOC	bis(2-Chloroisopropyl) ether	108-60-1	mg/kg	269	0	0.00%	330	356	38000		1,190			0.00%	681,967		0.00%				0.00%	
SVOC	bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	269	46	17.10%	42	368	4800		1,228			0.00%	2.46E+06		0.00%				0.00%	
SVOC	Butylbenzylphthalate	85-68-7	mg/kg	270	22	8.15%	35	881	140000		8,581			0.00%	1.84E+08		0.00%				0.00%	
SVOC	Carbazole	86-74-8	mg/kg	13	0	0.00%	350	198	430		10.7			0.00%	1.73E+06		0.00%				0.00%	
SVOC	Chrysene	218-01-9	mg/kg	270	28	10.37%	40	647	53000		3,965			0.00%	4.36E+06		0.00%				0.00%	
SVOC	Dibenz(a,h)anthracene	53-70-3	mg/kg	270	4	1.48%	53	360	1200		1,190			0.00%	4,362		0.00%				0.00%	
SVOC	Dibenzofuran	132-64-9	mg/kg	270	10	3.70%	39	412	20000		1,558			0.00%	2.56E+06		0.00%				0.00%	
SVOC	Diethylphthalate	84-66-2	mg/kg	270	2	0.74%	150	390	1300		1,186			0.00%	7.37E+08		0.00%				0.00%	
SVOC	Dimethylphthalate	131-11-3	mg/kg	270	1	0.37%	2100	362	2100		1,193			0.00%	9.22E+09		0.00%				0.00%	
SVOC	Di-n-butylphthalate	84-74-2	mg/kg	270	31	11.48%	41	351	550	BJ	1,189			0.00%	9.22E+07		0.00%				0.00%	
SVOC	Di-n-octylphthalate	117-84-0	mg/kg	270	0	0.00%	330	356	38000		1,188			0.00%	3.69E+07		0.00%				0.00%	
SVOC	Fluoranthene	206-44-0	mg/kg	270	34	12.59%	39	1,361	160000	E	11,800			0.00%	3.40E+07		0.00%				0.00%	
SVOC	Fluorene	86-73-7	mg/kg	270	12	4.44%	75	526	35000		2,721			0.00%	3.69E+07		0.00%				0.00%	
SVOC	Hexachlorobenzene	118-74-1	mg/kg	270	1	0.37%	1300	359	1300		1,189			0.00%	21,508		0.00%				0.00%	
SVOC	Hexachlorobutadiene	87-68-3	mg/kg	698	7	1.00%	0.5	264	4.6	J	1,650			0.00%	255,500		0.00%				0.00%	
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	269	12	4.46%	54	415	22000	DJ	1,563			0.00%	43,616		0.00%				0.00%	
SVOC	Isophorone	78-59-1	mg/kg	270	0	0.00%	330	356	38000		1,188			0.00%	3.63E+07		0.00%				0.00%	

Ra-228 adjusted for Subsurface Background Mean +2SD

Table 7 Subsurface Soil Summary Statistics > 8.0 and ≤ 12.0 feet

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
SVOC	Naphthalene	91-20-3	mg/kg	697	57	8.18%	0.44	471	61000		3,702			0.00%	1.61E+07		0.00%				0.00%	
SVOC	Nitrobenzene	98-95-3	mg/kg	271	0	0.00%	250	355	38000		1,186			0.00%	497,333		0.00%				0.00%	
SVOC	N-Nitrosodiethylamine	55-18-5	mg/kg	29	0	0.00%	680	818	14000		1,444			0.00%	229		0.00%				0.00%	
SVOC	N-Nitrosodimethylamine	62-75-9	mg/kg	29	0	0.00%	680	818	14000		1,444			0.00%	675		0.00%				0.00%	
SVOC	N-Nitrosodi-n-butylamine	924-16-3	mg/kg	29	0	0.00%	340	411	7100		730			0.00%	5,977		0.00%				0.00%	
SVOC	N-Nitroso-di-n-propylamine	621-64-7	mg/kg	270	0	0.00%	330	356	38000		1,188			0.00%	4,929		0.00%				0.00%	
SVOC	N-nitrosodiphenylamine	86-30-6	mg/kg	270	2	0.74%	870	355	2400	J	1,188			0.00%	7.04E+06		0.00%				0.00%	
SVOC	Pentachlorobenzene	608-93-5	mg/kg	29	0	0.00%	340	411	7100		730			0.00%	737,321		0.00%				0.00%	
SVOC	Pentachlorophenol	87-86-5	mg/kg	269	1	0.37%	160	1,728	160	J	5,938			0.00%	202,777		0.00%				0.00%	
SVOC	Phenol	108-95-2	mg/kg	270	30	11.11%	46	405	1800		1,199			0.00%	2.76E+08		0.00%				0.00%	
SVOC	Pyrene	129-00-0	mg/kg	270	31	11.48%	46	1,321	150000	E	10,637			0.00%	2.55E+07		0.00%				0.00%	
VOC	1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	427	0	0.00%	0.303	174	48140		1,500			0.00%	1.05E+06		0.00%				0.00%	
VOC	1,1,1-Trichloroethane	71-55-6	mg/kg	850	47	5.53%	0.42	686	358000	E	12,713			0.00%	1.06E+08		0.00%				0.00%	
VOC	1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	842	1	0.12%	1	111	1	J	1,130			0.00%	120,551		0.00%				0.00%	
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	mg/kg	426	3	0.70%	1	460	1890	E	4,331			0.00%	2.74E+10		0.00%				0.00%	
VOC	1,1,2-Trichloroethane	79-00-5	mg/kg	848	2	0.24%	2.3	108	55		1,098			0.00%	322,253		0.00%				0.00%	
VOC	1,1-Dichloroethane	75-34-3	mg/kg	851	8	0.94%	0.21	109	1200		1,100			0.00%	3.12E+07		0.00%				0.00%	
VOC	1,1-Dichloroethene	75-35-4	mg/kg	851	24	2.82%	0.71	148	370		1,544			0.00%	199,706		0.00%				0.00%	
VOC	1,2,3-Trichloropropane	96-18-4	mg/kg	428	0	0.00%	0.572	302	98390		2,961			0.00%	23,910		0.00%				0.00%	
VOC	1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	428	0	0.00%	1.271	604	131300		5,253			0.00%	34,137		0.00%				0.00%	
VOC	1,2-Dibromoethane	106-93-4	mg/kg	427	0	0.00%	0.466	188	48140		1,566			0.00%	403		0.00%				0.00%	
VOC	1,2-Dichlorobenzene	95-50-1	mg/kg	665	6	0.90%	0.11	235	74		1,419			0.00%	3.32E+07		0.00%				0.00%	
VOC	1,2-Dichloroethane	107-06-2	mg/kg	842	6	0.71%	0.31	116	20	J	1,177			0.00%	152,603		0.00%				0.00%	
VOC	1,2-Dichloroethene	540-59-0	mg/kg	363	1	0.28%	4	12.9	4	J	60.2			0.00%	1.15E+07		0.00%				0.00%	
VOC	1,2-Dichloropropane	78-87-5	mg/kg	848	0	0.00%	0.349	99.1	48140		1,047			0.00%	441,907		0.00%				0.00%	
VOC	1,3-Dichlorobenzene	541-73-1	mg/kg	714	3	0.42%	0.28	248	11		1,386			0.00%	3.83E+07		0.00%				0.00%	
VOC	1,4-Dichlorobenzene	106-46-7	mg/kg	664	5	0.75%	0.86	306	84	BJ	2,303			0.00%	1.05E+06		0.00%				0.00%	
VOC	2-Butanone	78-93-3	mg/kg	772	67	8.68%	1.9	3,478	2000		47,596			0.00%	5.33E+08		0.00%				0.00%	
VOC	4-Methyl-2-pentanone	108-10-1	mg/kg	826	13	1.57%	1	1,169	8200		14,224			0.00%	9.57E+08		0.00%				0.00%	
VOC	Acetone	67-64-1	mg/kg	805	256	31.80%	1.8	5,236	2500	BJ	77,583			0.00%	1.15E+09		0.00%				0.00%	
VOC	Benzene	71-43-2	mg/kg	854	8	0.94%	0.11	105	250	B	1,075			0.00%	270,977		0.00%				0.00%	
VOC	Bromodichloromethane	75-27-4	mg/kg	846	0	0.00%	0.363	103	48140		1,067			0.00%	771,304		0.00%				0.00%	
VOC	Bromoform	75-25-2	mg/kg	842	0	0.00%	0.54	132	57470		1,373			0.00%	4.83E+06		0.00%				0.00%	
VOC	Bromomethane	74-83-9	mg/kg	816	0	0.00%	0.762	241	93290		2,512			0.00%	241,033		0.00%				0.00%	
VOC	Carbon Disulfide	75-15-0	mg/kg	843	6	0.71%	1.7	163	290	J	1,869			0.00%	1.88E+07		0.00%				0.00%	
VOC	Carbon Tetrachloride	56-23-5	mg/kg	846	28	3.31%	0.44	156	5400		1,786			0.00%	97,124		0.00%				0.00%	
VOC	Chlorobenzene	108-90-7	mg/kg	846	1	0.12%	10.8	100	10.8	J	1,055			0.00%	7.67E+06		0.00%				0.00%	
VOC	Chloroethane	75-00-3	mg/kg	827	0	0.00%	1.013	225	104600		2,431			0.00%	1.65E+07		0.00%				0.00%	
VOC	Chloroform	67-66-3	mg/kg	848	35	4.13%	0.25	118	1980	E	1,251			0.00%	90,270		0.00%				0.00%	
VOC	Chloromethane	74-87-3	mg/kg	843	1	0.12%	4	218	4	J	2,325			0.00%	1.32E+06		0.00%				0.00%	
VOC	cis-1,3-Dichloropropene	10061-01-5	mg/kg	848	0	0.00%	0.363	103	48140		1,064			0.00%	223,462		0.00%				0.00%	
VOC	Dibromochloromethane	124-48-1	mg/kg	847	0	0.00%	0.466	109	48140		1,105			0.00%	569,296		0.00%				0.00%	
VOC	Dichlorodifluoromethane	75-71-8	mg/kg	425	3	0.71%	2	847	26		7,417			0.00%	2.64E+06		0.00%				0.00%	
VOC	Ethylbenzene	100-41-4	mg/kg	860	18	2.09%	0.18	104	350		1,063			0.00%	6.19E+07		0.00%				0.00%	
VOC	Hexachloroethane	67-72-1	mg/kg	270	0	0.00%	330	356	38000		1,188			0.00%	1.28E+06		0.00%				0.00%	
VOC	Isopropylbenzene	98-82-8	mg/kg	427	10	2.34%	0.12	176	21		1,506			0.00%	375,823		0.00%				0.00%	
VOC	m,p-Xylene		mg/kg	6	0	0.00%	6	7.75	63		11.6			0.00%	1.22E+07		0.00%				0.00%	
VOC	Methylene Chloride	75-09-2	mg/kg	847	229	27.04%	0.59	126	1900		1,109			0.00%	3.13E+06		0.00%				0.00%	
VOC	o-Xylene	95-47-6	mg/kg	23	0	0.00%	6	231	620		136			0.00%	1.22E+07		0.00%				0.00%	
VOC	Styrene	100-42-5	mg/kg	847	6	0.71%	0.099	113	136		1,179			0.00%	1.59E+08		0.00%				0.00%	
VOC	Toluene	108-88-3	mg/kg	865	293	33.87%	0.091	166	7600		1,495			0.00%	3.56E+07		0.00%				0.00%	
VOC	trans-1,3-Dichloropropene	10061-02-6	mg/kg	840	0	0.00%	0.337	109	48140		1,104			0.00%	239,434		0.00%				0.00%	
VOC	Trichlorofluoromethane	75-69-4	mg/kg	423	3	0.71%	0.71	489	1	J	4,288			0.00%	1.74E+07		0.00%				0.00%	
VOC	Vinyl acetate	108-05-4	mg/kg	344	0	0.00%	10	29.0	7800		224			0.00%	3.04E+07		0.00%				0.00%	
VOC	Vinyl Chloride	75-01-4	mg/kg	846	1	0.12%	570	226	570	E	2,308			0.00%	24,948		0.00%				0.00%	

Ra-228 adjusted for Subsurface Background Mean +2SD

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Table 7 Subsurface Soil Summary Statistics > 8.0 and ≤ 12.0 feet

6/28/2005

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
VOC	Xylene	1330-20-7	mg/kg	853	28	3.28%	0.19	153	2000		1.581			0.00%	1.22E+07		0.00%				0.00%	
Radionuclide	Americium-241	86954-36-1	pCi/g	369	244	66.12%	-0.005	0.315	44.1		2.66	0.010	86	23.31%	88.4		0.00%				0.00%	
Radionuclide	Cesium-134	13967-70-9	pCi/g	40	39	97.50%	-0.0926	0.023	0.12		0.054			0.00%	0.910		0.00%				0.00%	
Radionuclide	Cesium-137	10045-97-3	pCi/g	88	86	97.73%	-0.0527	0.022	0.3		0.054	0.143	2	2.27%	2.54		0.00%				0.00%	
Radionuclide	Neptunium-237	13994-20-2	pCi/g	4	4	100.00%	0.0001632	0.009	0.02679		0.012			0.00%	62.5		0.00%				0.00%	
Radionuclide	Plutonium-238	13981-16-3	pCi/g	59	49	83.05%	-0.00481	0.043	1.93		0.256			0.00%	68.7		0.00%				0.00%	
Radionuclide	Radium-226	13982-63-3	pCi/g	62	62	100.00%	-0.3085	0.938	2.277		0.501	1.34	13	20.97%	31.0		0.00%				0.00%	
Radionuclide	Strontium-89/90		pCi/g	115	105	91.30%	-0.7427	0.213	1		0.266	0.570	8	6.96%	152		0.00%				0.00%	
Radionuclide	Tritium	10028-17-8	pCi/g	1	1	100.00%	60	60.0	60					0.00%	288,449		0.00%				0.00%	
Radionuclide	Uranium-233/234		pCi/g	391	389	99.49%	0.021	2.36	241		14.0	2.08	37	9.46%	291		0.00%				0.00%	
Radionuclide	Uranium-234	13966-29-5	pCi/g	1	1	100.00%	0.865	0.865	0.865					0.00%	291		0.00%				0.00%	
Metal	Chromium (total)	7440-47-3	mg/kg	568	560	98.59%	1.4	29.9	8310		348	42.2	19	3.35%	327	1	0.18%	No	Chromium (total)	1	0.18%	Chromium (total)
Metal	Arsenic	7440-38-2	mg/kg	570	564	98.95%	0.55	4.87	96.9		4.97	17.5	4	0.70%	27.7	2	0.35%	No	Arsenic		0.00%	
SVOC	Benzo(a)anthracene	56-55-3	mg/kg	270	22	8.15%	46	622	48000		3,792			0.00%	43,616	1	0.37%	No	Benzo(a)anthracene		0.00%	
SVOC	Benzo(b)fluoranthene	205-99-2	mg/kg	268	13	4.85%	97	625	48000		3,803			0.00%	43,616	1	0.37%	No	Benzo(b)fluoranthene		0.00%	
PCB	PCB-1016	12674-11-2	mg/kg	197	3	1.52%	37	478	17000	J	2,216			0.00%	15,514	1	0.51%	No	PCB-1016		0.00%	
Radionuclide	Plutonium-239/240		pCi/g	392	277	70.66%	-0.0135	1.31	223		13.3	0.022	79	20.15%	112	2	0.51%	No	Plutonium-239/240		0.00%	
Radionuclide	Uranium-235	15117-96-1	pCi/g	392	291	74.23%	-0.0188	0.228	37.68		2.09	0.162	23	5.87%	12.1	2	0.51%	No	Uranium-235		0.00%	
Radionuclide	Uranium-238	7440-61-1	pCi/g	392	391	99.74%	0.234	7.23	1160		73.4	1.77	49	12.50%	337	2	0.51%	No	Uranium-238		0.00%	
VOC	Trichloroethene	79-01-6	mg/kg	852	114	13.38%	0.8	2,189	831000	E	31,808			0.00%	20,354	7	0.82%	No	Trichloroethene	3	0.35%	Trichloroethene
VOC	Tetrachloroethene	127-18-4	mg/kg	850	128	15.06%	0.25	27,636	7520000	E	340,245			0.00%	77,111	12	1.41%	No	Tetrachloroethene	6	0.71%	Tetrachloroethene
PCB	PCB-1260	11096-82-5	mg/kg	197	23	11.68%	12	886	60000		5,229			0.00%	15,514	3	1.52%	No	PCB-1260		0.00%	
SVOC	Benzo(a)pyrene	50-32-8	mg/kg	270	18	6.67%	63	612	43000		3,393			0.00%	4,357	5	1.85%	No	Benzo(a)pyrene		0.00%	
PCB	PCB-1254	11097-69-1	mg/kg	197	34	17.26%	9.2	1,905	160000		12,721			0.00%	15,514	6	3.05%	No	PCB-1254	1	0.51%	PCB-1254
Radionuclide	Radium-228	15262-20-1	pCi/g	81	81	100.00%	0	1.47	3.5		0.576	2.09	10	12.35%	1.28	10	12.35%	Yes			0.00%	

	The frequency of detection of the analyte concentration above the PRG is greater than (>) 0% and less than (<) 1%
	The frequency of detection of the analyte concentration above the PRG is greater than or equal to (≥) 1% and less than (<) 5%
	The frequency of detection of the analyte concentration above the PRG is greater than or equal to (≥) 5%

Notes:

Chromium (total) is conservatively compared with the Chromium VI PRG.

A Key to laboratory qualifier codes is provided in Table 11.

For analytes with no detections (Percent Detection Frequency = 0%), the Minimum and Maximum Concentration columns contain the minimum and maximum non-detection values.

The Mean Concentration and Standard Deviation columns are calculated based on one-half of all the non-detected values for the analyte, except for radionuclides where all results are used.

The PCBs identfied above under the Standard Name Column are equivalent to Aroclors, for example PCB-1254 is the same as Aroclor-1254.

For radium-228 the Subsurface Background Mean + 2SD value is greater than the WRW PRG. Therefore, only those results greater than both the Subsurface Background Mean +2SD and WRW PRG are reported under AOI Screen 2.

Ra-228 adjusted for Subsurface Background Mean +2SD

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Table 8 Subsurface Soil Summary Statistics >12.0 and ≤ 30.0 feet

6/28/2005

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
Metal	Aluminum	7429-90-5	mg/kg	666	0	100.00%	1730	10,043	34000		5,141	30,392	3	0.45%	284,902		0.00%				0.00%	
Metal	Antimony	7440-36-0	mg/kg	615	547	11.06%	0.31	3.56	21		3.12	9.78	19	3.09%	511		0.00%				0.00%	
Metal	Arsenic	7440-38-2	mg/kg	666	13	98.05%	0.46	4.17	18		2.65	17.5	1	0.15%	27.7		0.00%				0.00%	
Metal	Barium	7440-39-3	mg/kg	666	0	100.00%	13.9	118	4150	*	250	291	29	4.35%	33,033		0.00%				0.00%	
Metal	Beryllium	7440-41-7	mg/kg	663	137	79.34%	0.18	0.712	2		0.324	15.8		0.00%	1,151		0.00%				0.00%	
Metal	Boron	7440-42-8	mg/kg	115	13	88.70%	0.44	2.99	9.7		1.80			0.00%	108,980		0.00%				0.00%	
Metal	Cadmium	7440-43-9	mg/kg	618	515	16.67%	0.073	0.374	16.7		0.733	1.08	23	3.72%	1,051		0.00%				0.00%	
Metal	Chromium VI		mg/kg	19	15	21.05%	0.62	0.436	1.16		0.275			0.00%	327		0.00%				0.00%	
Metal	Cobalt	7440-48-4	mg/kg	666	22	96.70%	0.87	6.82	78.1		5.22	15.4	27	4.05%	1,401		0.00%				0.00%	
Metal	Copper	7440-50-8	mg/kg	666	16	97.60%	2.9	15.6	361		18.2	23.8	53	7.96%	51,100		0.00%				0.00%	
Metal	Iron	7439-89-6	mg/kg	666	0	100.00%	1060	12,977	50800		6,515	28,459	17	2.55%	383,250		0.00%				0.00%	
Metal	Lead	7439-92-1	mg/kg	666	3	99.55%	1.4	12.4	278	SN	16.0	26.5	18	2.70%	1000*		0.00%				0.00%	
Metal	Lithium	7439-93-2	mg/kg	646	99	84.67%	1	6.50	29.5		3.94	20.5	4	0.62%	25,550		0.00%				0.00%	
Metal	Manganese	7439-96-5	mg/kg	666	0	100.00%	5.3	207	3160	N*	227	487	49	7.36%	4,815		0.00%				0.00%	
Metal	Mercury	7439-97-6	mg/kg	655	462	29.47%	0.0069	0.056	1.4		0.073	0.488	2	0.31%	379		0.00%				0.00%	
Metal	Molybdenum	7439-98-7	mg/kg	646	444	31.27%	0.15	1.79	241		9.80	29.1	2	0.31%	6,388		0.00%				0.00%	
Metal	Nickel	7440-02-0	mg/kg	666	53	92.04%	2.6	15.2	355		21.0	43.0	17	2.55%	25,550		0.00%				0.00%	
Metal	Selenium	7782-49-2	mg/kg	656	598	8.84%	0.21	0.267	2.1		0.265	1.68	2	0.30%	6,388		0.00%				0.00%	
Metal	Silver	7440-22-4	mg/kg	640	542	15.31%	0.085	0.717	24		1.76	26.6		0.00%	6,388		0.00%				0.00%	
Metal	Strontium	7440-24-6	mg/kg	663	1	99.85%	4.8	42.8	420		38.2	136	11	1.66%	766,500		0.00%				0.00%	
Metal	Thallium	7440-28-0	mg/kg	663	521	21.42%	0.2	0.281	2.5		0.285	1.42	5	0.75%	89.4		0.00%				0.00%	
Metal	Tin	7440-31-5	mg/kg	653	534	18.22%	1	8.10	91.1		10.9	354		0.00%	766,500		0.00%				0.00%	
Metal	Titanium	7440-32-6	mg/kg	115	0	100.00%	12	107	350		74.0			0.00%	1.95E+06		0.00%				0.00%	
Metal	Uranium (total)		mg/kg	112	101	9.82%	0.66	1.06	13		1.49	3.04	3	2.68%	3,833		0.00%				0.00%	
Metal	Vanadium	7440-62-2	mg/kg	666	0	100.00%	2.7	26.2	93.5		11.9	63.3	6	0.90%	1,278		0.00%				0.00%	
Metal	Zinc	7440-66-6	mg/kg	666	4	99.40%	4.8	40.7	648		37.5	78.3	49	7.36%	383,250		0.00%				0.00%	
Wet Chem	Ammonia	7664-41-7	mg/kg	95	71	25.26%	0.361	0.290	1.329		0.248			0.00%	1.05E+07		0.00%				0.00%	
Wet Chem	Cyanide	57-12-5	mg/kg	163	159	2.45%	1.28	0.575	4.26		0.574			0.00%	25,550		0.00%				0.00%	
Wet Chem	Fluoride	16984-48-8	mg/kg	2	0	100.00%	0.71	0.800	0.89		0.127			0.00%	76,650		0.00%				0.00%	
Wet Chem	Nitrate / Nitrite	ConID 184	mg/kg	250	108	56.80%	0.1	33.3	1670		161	4.33	20	8.00%	2.04E+06		0.00%				0.00%	
Wet Chem	Nitrite	ConID 187	mg/kg	1	1	0.00%	5.6	2.80	5.6					0.00%	127,750		0.00%				0.00%	
Dioxins/Furans	2378-TCDD	1746-01-6	µg/kg	1	1	0.00%	0.1	0.050	0.1					0.00%	0.285		0.00%				0.00%	
Dioxins/Furans	Hexachlorodibenzo-p-dioxin	34465-46-8	µg/kg	1	1	0.00%	0.1	0.050	0.1					0.00%	5.55		0.00%				0.00%	
Herbicide	2,4,5-TP (Silvex)	93-72-1	µg/kg	12	12	0.00%	15	13.1	120		14.9			0.00%	1.95E+06		0.00%				0.00%	
Herbicide	2,4-D	94-75-7	µg/kg	12	12	0.00%	88	49.3	120		4.74			0.00%	9.22E+06		0.00%				0.00%	
Herbicide	2,4-DB	94-82-6	µg/kg	2	2	0.00%	99	49.5	99		0.00E+00			0.00%	7.37E+06		0.00%				0.00%	
Herbicide	4-Nitrophenol	100-02-7	µg/kg	386	386	0.00%	700	1,242	30000		899			0.00%	7.37E+06		0.00%				0.00%	
Herbicide	Dalapon	75-99-0	µg/kg	2	2	0.00%	49	24.8	50		0.354			0.00%	2.76E+07		0.00%				0.00%	
Herbicide	Dicamba	1918-00-9	µg/kg	2	2	0.00%	49	24.8	50		0.354			0.00%	2.76E+07		0.00%				0.00%	
Herbicide	Dinoseb	88-85-7	µg/kg	3	3	0.00%	15	143	830		235			0.00%	921,651		0.00%				0.00%	
Herbicide	MCPA	94-74-6	µg/kg	2	2	0.00%	9900	4,950	9900		0.00E+00			0.00%	460,825		0.00%				0.00%	
PCB	PCB-1016	12674-11-2	µg/kg	279	279	0.00%	34	116	6800		387			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1221	11104-28-2	µg/kg	279	279	0.00%	35	118	6800		386			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1232	11141-16-5	µg/kg	276	276	0.00%	34	116	6800		389			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1242	53469-21-9	µg/kg	278	277	0.36%	120	117	120		387			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1248	12672-29-6	µg/kg	279	279	0.00%	34	116	6800		387			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1254	11097-69-1	µg/kg	279	262	6.09%	29	220	7800		731			0.00%	15,514		0.00%				0.00%	
Pesticide	4,4'-DDD	72-54-8	µg/kg	215	215	0.00%	2	10.1	41		5.06			0.00%	178,570		0.00%				0.00%	
Pesticide	4,4'-DDE	72-55-9	µg/kg	214	214	0.00%	2	10.1	41		5.08			0.00%	126,049		0.00%				0.00%	
Pesticide	4,4'-DDT	50-29-3	µg/kg	215	215	0.00%	2	10.1	41		5.06			0.00%	125,658		0.00%				0.00%	
Pesticide	Aldrin	309-00-2	µg/kg	215	215	0.00%	1.8	5.06	21		2.49			0.00%	2,024		0.00%				0.00%	
Pesticide	alpha-BHC	319-84-6	µg/kg	215	215	0.00%	1.8	5.04	21		2.50			0.00%	6,555		0.00%				0.00%	
Pesticide	alpha-Chlordane	5103-71-9	µg/kg	213	213	0.00%	1.8	49.4	210		26.6			0.00%	117,997		0.00%				0.00%	

*The PRG value for lead is not calculated, but rather is taken from EPA's "Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities (1994)".

Ra-228 adjusted for Subsurface Background Mean +2SD

Table 8 Subsurface Soil Summary Statistics >12.0 and ≤ 30.0 feet

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
Pesticide	beta-BHC	319-85-7	µg/kg	215	215	0.00%	1.8	5.04	21		2.50			0.00%	22,942		0.00%				0.00%	
Pesticide	beta-Chlordane	5103-74-2	µg/kg	200	200	0.00%	1.8	48.8	210		26.8			0.00%	117,997		0.00%				0.00%	
Pesticide	Chlordane		µg/kg	2	2	0.00%	20	10.8	23		1.06			0.00%	117,997		0.00%				0.00%	
Pesticide	Chlorpyriphos	2921-88-2	µg/kg	1	1	0.00%	17	8.50	17					0.00%	2.76E+06		0.00%				0.00%	
Pesticide	delta-BHC	319-86-8	µg/kg	215	215	0.00%	1.8	5.04	21		2.50			0.00%	6,555		0.00%				0.00%	
Pesticide	Demeton-S	126-75-0	µg/kg	1	1	0.00%	17	8.50	17					0.00%	36,866		0.00%				0.00%	
Pesticide	Dieldrin	60-57-1	µg/kg	214	214	0.00%	2	10.1	41		5.06			0.00%	2,151		0.00%				0.00%	
Pesticide	Endosulfan I	959-98-8	µg/kg	215	215	0.00%	1.8	5.04	21		2.50			0.00%	5.53E+06		0.00%				0.00%	
Pesticide	Endosulfan II	33213-65-9	µg/kg	215	215	0.00%	2	10.1	41		5.06			0.00%	5.53E+06		0.00%				0.00%	
Pesticide	Endosulfan sulfate	1031-07-8	µg/kg	214	214	0.00%	2	10.1	41		5.08			0.00%	5.53E+06		0.00%				0.00%	
Pesticide	Endrin	72-20-8	µg/kg	214	214	0.00%	2	10.1	41		5.08			0.00%	276,495		0.00%				0.00%	
Pesticide	Endrin aldehyde	7421-93-4	µg/kg	28	28	0.00%	2	2.76	37		3.45			0.00%	276,495		0.00%				0.00%	
Pesticide	Endrin ketone	53494-70-5	µg/kg	214	214	0.00%	2	10.1	41		5.06			0.00%	383,250		0.00%				0.00%	
Pesticide	gamma-BHC (Lindane)	58-89-9	µg/kg	215	215	0.00%	1.8	5.04	21		2.50			0.00%	31,864		0.00%				0.00%	
Pesticide	gamma-Chlordane	12789-03-6	µg/kg	13	13	0.00%	84	62.8	200		23.5			0.00%	117,997		0.00%				0.00%	
Pesticide	Heptachlor	76-44-8	µg/kg	215	214	0.47%	4.4	5.06	4.4	P	2.48			0.00%	7,647		0.00%				0.00%	
Pesticide	Heptachlor epoxide	1024-57-3	µg/kg	215	215	0.00%	1.8	5.07	21		2.47			0.00%	3,782		0.00%				0.00%	
Pesticide	Hexachlorocyclopentadiene	77-47-4	µg/kg	380	380	0.00%	140	276	12000		323			0.00%	4.38E+06		0.00%				0.00%	
Pesticide	Methoxychlor	72-43-5	µg/kg	215	215	0.00%	3.8	50.4	210		25.1			0.00%	4.61E+06		0.00%				0.00%	
Pesticide	Toxaphene	8001-35-2	µg/kg	215	215	0.00%	86	114	1900		70.2			0.00%	31,284		0.00%				0.00%	
SVOC	1,2,4,5-Tetrachlorobenzene	95-94-3	µg/kg	6	6	0.00%	350	187	410		10.3			0.00%	276,495		0.00%				0.00%	
SVOC	1,2,4-Trichlorobenzene	120-82-1	µg/kg	754	737	2.25%	0.37	256	150		1,513			0.00%	1.74E+06		0.00%				0.00%	
SVOC	1,2-Diphenylhydrazine	122-66-7	µg/kg	5	5	0.00%	350	183	380		5.70			0.00%	43,021		0.00%				0.00%	
SVOC	2,3,4,6-Tetrachlorophenol	58-90-2	µg/kg	1	1	0.00%	410	205	410					0.00%	2.76E+07		0.00%				0.00%	
SVOC	2,4,5-Trichlorophenol	95-95-4	µg/kg	387	387	0.00%	350	958	30000		882			0.00%	9.22E+07		0.00%				0.00%	
SVOC	2,4,6-Trichlorophenol	88-06-2	µg/kg	387	387	0.00%	140	271	12000		320			0.00%	3.13E+06		0.00%				0.00%	
SVOC	2,4-Dichlorophenol	120-83-2	µg/kg	387	386	0.26%	440	271	440	J	320			0.00%	2.76E+06		0.00%				0.00%	
SVOC	2,4-Dimethylphenol	105-67-9	µg/kg	387	387	0.00%	140	271	12000		320			0.00%	1.84E+07		0.00%				0.00%	
SVOC	2,4-Dinitrophenol	51-28-5	µg/kg	367	367	0.00%	700	1,246	30000		915			0.00%	1.84E+06		0.00%				0.00%	
SVOC	2,4-Dinitrotoluene	121-14-2	µg/kg	387	387	0.00%	140	271	12000		320			0.00%	1.84E+06		0.00%				0.00%	
SVOC	2,6-Dinitrotoluene	606-20-2	µg/kg	387	387	0.00%	140	271	12000		320			0.00%	921,651		0.00%				0.00%	
SVOC	2-Chloronaphthalene	91-58-7	µg/kg	387	387	0.00%	140	271	12000		320			0.00%	7.37E+07		0.00%				0.00%	
SVOC	2-Chlorophenol	95-57-8	µg/kg	387	386	0.26%	55	270	55	J	320			0.00%	6.39E+06		0.00%				0.00%	
SVOC	2-Methylnaphthalene	91-57-6	µg/kg	387	376	2.84%	54	268	390	J	320			0.00%	3.69E+06		0.00%				0.00%	
SVOC	2-Methylphenol	95-48-7	µg/kg	383	381	0.52%	96	275	1800		331			0.00%	4.61E+07		0.00%				0.00%	
SVOC	2-Nitroaniline	88-74-4	µg/kg	387	387	0.00%	700	1,241	30000		898			0.00%	2.21E+06		0.00%				0.00%	
SVOC	3,3'-Dichlorobenzidine	91-94-1	µg/kg	368	368	0.00%	340	512	12000		368			0.00%	76,667		0.00%				0.00%	
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	µg/kg	387	387	0.00%	700	1,254	30000		899			0.00%	92,165		0.00%				0.00%	
SVOC	4-Chloroaniline	106-47-8	µg/kg	374	374	0.00%	330	338	12000		378			0.00%	3.69E+06		0.00%				0.00%	
SVOC	4-Methylphenol	106-44-5	µg/kg	385	376	2.34%	120	287	5800		427			0.00%	4.61E+06		0.00%				0.00%	
SVOC	4-Nitroaniline	100-01-6	µg/kg	366	366	0.00%	700	1,261	30000		919			0.00%	2.39E+06		0.00%				0.00%	
SVOC	Acenaphthene	83-32-9	µg/kg	387	365	5.68%	58	250	1600		334			0.00%	5.10E+07		0.00%				0.00%	
SVOC	Anthracene	120-12-7	µg/kg	387	364	5.94%	48	260	1800	D	360			0.00%	2.55E+08		0.00%				0.00%	
SVOC	Benzo(a)anthracene	56-55-3	µg/kg	387	354	8.53%	40	317	4300	E	488			0.00%	43,616		0.00%				0.00%	
SVOC	Benzo(a)pyrene	50-32-8	µg/kg	387	365	5.68%	42	315	3800	D	445			0.00%	4,357		0.00%				0.00%	
SVOC	Benzo(b)fluoranthene	205-99-2	µg/kg	387	366	5.43%	59	325	4500	D	487			0.00%	43,616		0.00%				0.00%	
SVOC	Benzo(k)fluoranthene	207-08-9	µg/kg	387	369	4.65%	95	287	1500	DJ	342			0.00%	436,159		0.00%				0.00%	
SVOC	Benzoic Acid	65-85-0	µg/kg	318	300	5.66%	50	1,249	2600	J	562			0.00%	3.69E+09		0.00%				0.00%	
SVOC	Benzyl Alcohol	100-51-6	µg/kg	340	340	0.00%	330	334	1900		232			0.00%	2.76E+08		0.00%				0.00%	
SVOC	bis(2-Chloroethyl) ether	111-44-4	µg/kg	387	387	0.00%	140	271	12000		320			0.00%	43,315		0.00%				0.00%	
SVOC	bis(2-Chloroisopropyl) ether	108-60-1	µg/kg	371	371	0.00%	140	274	12000		326			0.00%	681,967		0.00%				0.00%	
SVOC	bis(2-ethylhexyl)phthalate	117-81-7	µg/kg	384	310	19.27%	36	328	9800		717			0.00%	2.46E+06		0.00%				0.00%	
SVOC	Butylbenzylphthalate	85-68-7	µg/kg	387	378	2.33%	47	278	1400	B	328			0.00%	1.84E+08		0.00%				0.00%	
SVOC	Carbazole	86-74-8	µg/kg	40	37	7.50%	120	409	820		951			0.00%	1.73E+06		0.00%				0.00%	

Ra-228 adjusted for Subsurface Background Mean +2SD

Table 8 Subsurface Soil Summary Statistics >12.0 and ≤ 30.0 feet

6/28/2005

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
SVOC	Chrysene	218-01-9	µg/kg	387	353	8.79%	47	316	3800	D	470			0.00%	4.36E+06		0.00%				0.00%	
SVOC	Dibenz(a,h)anthracene	53-70-3	µg/kg	386	378	2.07%	92	270	700	DJ	320			0.00%	4,362		0.00%				0.00%	
SVOC	Dibenzofuran	132-64-9	µg/kg	387	369	4.65%	41	272	980		325			0.00%	2.56E+06		0.00%				0.00%	
SVOC	Diethylphthalate	84-66-2	µg/kg	387	377	2.58%	36	283	3100		354			0.00%	7.37E+08		0.00%				0.00%	
SVOC	Dimethoate .	60-51-5	µg/kg	1	1	0.00%	17	8.50	17					0.00%	184,330		0.00%				0.00%	
SVOC	Dimethylphthalate	131-11-3	µg/kg	387	386	0.26%	26	271	26	J	320			0.00%	9.22E+09		0.00%				0.00%	
SVOC	Di-n-butylphthalate	84-74-2	µg/kg	387	346	10.59%	37	286	4600		396			0.00%	9.22E+07		0.00%				0.00%	
SVOC	Di-n-octylphthalate	117-84-0	µg/kg	386	383	0.78%	120	270	580	J	321			0.00%	3.69E+07		0.00%				0.00%	
SVOC	Fluoranthene	206-44-0	µg/kg	387	349	9.82%	28	421	11000		987			0.00%	3.40E+07		0.00%				0.00%	
SVOC	Fluorene	86-73-7	µg/kg	387	368	4.91%	53	284	1700		343			0.00%	3.69E+07		0.00%				0.00%	
SVOC	Hexachlorobenzene	118-74-1	µg/kg	387	387	0.00%	140	271	12000		320			0.00%	21,508		0.00%				0.00%	
SVOC	Hexachlorobutadiene	87-68-3	µg/kg	753	743	1.33%	1.4	258	11500	JE	1,475			0.00%	255,500		0.00%				0.00%	
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	387	371	4.13%	60	287	2400	D	355			0.00%	43,616		0.00%				0.00%	
SVOC	Isophorone	78-59-1	µg/kg	387	386	0.26%	82	270	82	J	320			0.00%	3.63E+07		0.00%				0.00%	
SVOC	Naphthalene	91-20-3	µg/kg	754	685	9.15%	0.43	282	1500	J	1,731			0.00%	1.61E+07		0.00%				0.00%	
SVOC	Nitrobenzene	98-95-3	µg/kg	387	387	0.00%	140	271	12000		320			0.00%	497,333		0.00%				0.00%	
SVOC	N-Nitrosodiethylamine	55-18-5	µg/kg	6	6	0.00%	410	338	770		66.5			0.00%	229		0.00%				0.00%	
SVOC	N-Nitrosodimethylamine	62-75-9	µg/kg	6	6	0.00%	410	338	770		66.5			0.00%	675		0.00%				0.00%	
SVOC	N-Nitrosodi-n-butylamine	924-16-3	µg/kg	6	6	0.00%	350	187	410		10.3			0.00%	5,977		0.00%				0.00%	
SVOC	N-Nitroso-di-n-propylamine	621-64-7	µg/kg	387	387	0.00%	140	271	12000		320			0.00%	4,929		0.00%				0.00%	
SVOC	N-nitrosodiphenylamine	86-30-6	µg/kg	386	386	0.00%	140	271	12000		320			0.00%	7.04E+06		0.00%				0.00%	
SVOC	N-Nitrosopyrrolidine	930-55-2	µg/kg	1	1	0.00%	2100	1,050	2100					0.00%	16,387		0.00%				0.00%	
SVOC	Parathion	56-38-2	µg/kg	1	1	0.00%	17	8.50	17					0.00%	5.53E+06		0.00%				0.00%	
SVOC	Pentachlorobenzene	608-93-5	µg/kg	6	6	0.00%	350	187	410		10.3			0.00%	737,321		0.00%				0.00%	
SVOC	Pentachlorophenol	87-86-5	µg/kg	387	386	0.26%	390	1,237	390	J	898			0.00%	202,777		0.00%				0.00%	
SVOC	Phenol	108-95-2	µg/kg	387	383	1.03%	44	270	510		320			0.00%	2.76E+08		0.00%				0.00%	
SVOC	Pyrene	129-00-0	µg/kg	387	354	8.53%	49	407	9400		884			0.00%	2.55E+07		0.00%				0.00%	
VOC	1,1,1,2-Tetrachloroethane	630-20-6	µg/kg	368	368	0.00%	0.493	195	62500		1,869			0.00%	1.05E+06		0.00%				0.00%	
VOC	1,1,1-Trichloroethane	71-55-6	µg/kg	1165	1132	2.83%	1.9	7,002	53000	JE	192,294			0.00%	1.06E+08		0.00%				0.00%	
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	µg/kg	362	346	4.42%	1	395	5170	E	3,196			0.00%	2.74E+10		0.00%				0.00%	
VOC	1,1,2-Trichloroethane	79-00-5	µg/kg	1165	1164	0.09%	0.96	6,912	0.96	J	192,285			0.00%	322,253		0.00%				0.00%	
VOC	1,1-Dichloroethane	75-34-3	µg/kg	1167	1161	0.51%	0.25	6,902	18		192,120			0.00%	3.12E+07		0.00%				0.00%	
VOC	1,1-Dichloroethene	75-35-4	µg/kg	1166	1140	2.23%	0.814	6,914	230	J	192,203			0.00%	199,706		0.00%				0.00%	
VOC	1,2,3-Trichloropropane	96-18-4	µg/kg	368	368	0.00%	0.992	283	63780		2,488			0.00%	23,910		0.00%				0.00%	
VOC	1,2-Dibromo-3-chloropropane	96-12-8	µg/kg	368	368	0.00%	1.346	341	85120		2,995			0.00%	34,137		0.00%				0.00%	
VOC	1,2-Dibromoethane	106-93-4	µg/kg	368	368	0.00%	0.493	195	62500		1,869			0.00%	403		0.00%				0.00%	
VOC	1,2-Dichlorobenzene	95-50-1	µg/kg	710	705	0.70%	0.73	222	80	J	1,365			0.00%	3.32E+07		0.00%				0.00%	
VOC	1,2-Dichloroethane	107-06-2	µg/kg	1158	1150	0.69%	0.44	6,955	7.4		192,865			0.00%	152,603		0.00%				0.00%	
VOC	1,2-Dichloroethene	540-59-0	µg/kg	738	731	0.95%	2	10,793	1200	J	241,562			0.00%	1.15E+07		0.00%				0.00%	
VOC	1,2-Dichloropropane	78-87-5	µg/kg	1165	1160	0.43%	2.2	6,913	71.6		192,285			0.00%	441,907		0.00%				0.00%	
VOC	1,3-Dichlorobenzene	541-73-1	µg/kg	773	767	0.78%	0.94	236	330	E	1,311			0.00%	3.83E+07		0.00%				0.00%	
VOC	1,4-Dichlorobenzene	106-46-7	µg/kg	710	704	0.85%	1.2	262	2200	E	1,717			0.00%	1.05E+06		0.00%				0.00%	
VOC	2-Butanone	78-93-3	µg/kg	1025	913	10.93%	1.7	10,031	2200	E	207,293			0.00%	5.33E+08		0.00%				0.00%	
VOC	2-Methyl-1-propanol	78-83-1	µg/kg	1	1	0.00%	2500	1,250	2500					0.00%	3.83E+08		0.00%				0.00%	
VOC	4-Methyl-2-pentanone	108-10-1	µg/kg	1110	1090	1.80%	2	8,000	360	E	197,311			0.00%	9.57E+08		0.00%				0.00%	
VOC	Acetone	67-64-1	µg/kg	1108	812	26.71%	1	32,593	31000000	B	932,977			0.00%	1.15E+09		0.00%				0.00%	
VOC	Benzene	71-43-2	µg/kg	1177	1166	0.93%	0.87	6,843	270	B	191,303			0.00%	270,977		0.00%				0.00%	
VOC	Bromodichloromethane	75-27-4	µg/kg	1160	1159	0.09%	0.44	6,942	0.44	J	192,699			0.00%	771,304		0.00%				0.00%	
VOC	Bromoform	75-25-2	µg/kg	1152	1151	0.09%	1700000	2,830	1700000	J	56,880			0.00%	4.83E+06		0.00%				0.00%	
VOC	Bromomethane	74-83-9	µg/kg	1122	1122	0.00%	0.956	7,233	13000000		195,934			0.00%	241,033		0.00%				0.00%	
VOC	Carbon Disulfide	75-15-0	µg/kg	1157	1148	0.78%	0.34	6,817	110000	J	192,760			0.00%	1.88E+07		0.00%				0.00%	
VOC	Chlorobenzene	108-90-7	µg/kg	1164	1161	0.26%	1	6,918	4	J	192,368			0.00%	7.67E+06		0.00%				0.00%	
VOC	Chloroethane	75-00-3	µg/kg	1141	1140	0.09%	8	7,119	8	J	194,297			0.00%	1.65E+07		0.00%				0.00%	
VOC	Chloromethane	74-87-3	µg/kg	1163	1162	0.09%	250	6,980	250	J	192,451			0.00%	1.32E+06		0.00%				0.00%	

Ra-228 adjusted for Subsurface Background Mean +2SD

Table 8 Subsurface Soil Summary Statistics >12.0 and ≤ 30.0 feet

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
VOC	cis-1,3-Dichloropropene	10061-01-5	µg/kg	1166	1166	0.00%	0.493	6,907	13000000		192,203			0.00%	223,462		0.00%				0.00%	
VOC	Dibromochloromethane	124-48-1	µg/kg	1166	1166	0.00%	0.493	6,907	13000000		192,203			0.00%	569,296		0.00%				0.00%	
VOC	Dichlorodifluoromethane	75-71-8	µg/kg	360	358	0.56%	4.2	442	6.03	J	3,884			0.00%	2.64E+06		0.00%				0.00%	
VOC	Ethylbenzene	100-41-4	µg/kg	1179	1155	2.04%	0.3	6,831	390		191,141			0.00%	6.19E+07		0.00%				0.00%	
VOC	Hexachloroethane	67-72-1	µg/kg	387	384	0.78%	610	288	3300		387			0.00%	1.28E+06		0.00%				0.00%	
VOC	Isopropylbenzene	98-82-8	µg/kg	367	361	1.63%	0.28	196	46.5		1,872			0.00%	375,823		0.00%				0.00%	
VOC	m,p-Xylene		µg/kg	7	7	0.00%	6	23.4	63		13.9			0.00%	1.22E+07		0.00%				0.00%	
VOC	methyl methacrylate	80-62-6	µg/kg	1	1	0.00%	25	12.5	25					0.00%	1.43E+08		0.00%				0.00%	
VOC	o-Xylene	95-47-6	µg/kg	26	26	0.00%	6	233	620		130			0.00%	1.22E+07		0.00%				0.00%	
VOC	Styrene	100-42-5	µg/kg	1166	1158	0.69%	0.14	6,909	90		192,203			0.00%	1.59E+08		0.00%				0.00%	
VOC	Toluene	108-88-3	µg/kg	1213	691	43.03%	0.11	6,704	3400	E	188,442			0.00%	3.56E+07		0.00%				0.00%	
VOC	trans-1,3-Dichloropropene	10061-02-6	µg/kg	1152	1152	0.00%	0.493	6,991	13000000		193,367			0.00%	239,434		0.00%				0.00%	
VOC	Trichlorofluoromethane	75-69-4	µg/kg	368	367	0.27%	3	335	3	JB	2,943			0.00%	1.74E+07		0.00%				0.00%	
VOC	Vinyl acetate	108-05-4	µg/kg	589	589	0.00%	10	22.9	7000		208		-	0.00%	3.04E+07		0.00%				0.00%	
VOC	Vinyl Chloride	75-01-4	µg/kg	1166	1165	0.09%	7.7	6,971	7.7		192,203			0.00%	24,948		0.00%				0.00%	
VOC	Xylene	1330-20-7	µg/kg	1173	1133	3.41%	1	6,867	1400	E	191,629			0.00%	1.22E+07		0.00%				0.00%	
Radionuclide	Americium-241	86954-36-1	pCi/g	569	199	65.03%	-0.0052	0.111	29.3		1.28	0.010	129	22.67%	88.4		0.00%				0.00%	
Radionuclide	Cesium-134	13967-70-9	pCi/g	44	8	81.82%	-0.0647	0.032	0.1		0.043			0.00%	0.910		0.00%				0.00%	
Radionuclide	Cesium-137	10045-97-3	pCi/g	207	19	90.82%	-0.0495	0.040	0.27		0.054	0.143	6	2.90%	2.54		0.00%				0.00%	
Radionuclide	Neptunium-237	13994-20-2	pCi/g	10	0	100.00%	0.001917	0.021	0.05457		0.014			0.00%	62.5		0.00%				0.00%	
Radionuclide	Plutonium-238	13981-16-3	pCi/g	58	11	81.03%	-0.00554	0.003	0.0332		0.007			0.00%	68.7		0.00%				0.00%	
Radionuclide	Plutonium-239/240		pCi/g	603	181	69.98%	-0.0221	0.239	50.6	B	2.33	0.022	104	17.25%	112		0.00%				0.00%	
Radionuclide	Radium-226	13982-63-3	pCi/g	128	6	95.31%	-0.46	0.814	2.677	X	0.454	1.34	12	9.38%	31.0		0.00%				0.00%	
Radionuclide	Strontium-89/90		pCi/g	239	47	80.33%	-0.16	0.226	2.23		0.267	0.570	16	6.69%	152		0.00%				0.00%	
Radionuclide	Tritium	10028-17-8	pCi/g	11	0	100.00%	44	196	510		125			0.00%	288,449		0.00%				0.00%	
Radionuclide	Uranium-233/234		pCi/g	600	0	100.00%	0.185	1.10	55	B	2.37	2.08	34	5.67%	291		0.00%				0.00%	
Radionuclide	Uranium-234	13966-29-5	pCi/g	2	0	100.00%	0.786	1.01	1.24		0.321			0.00%	291		0.00%				0.00%	
Radionuclide	Uranium-235	15117-96-1	pCi/g	601	116	80.70%	-0.0113	0.057	2.1	B	0.103	0.162	14	2.33%	12.1		0.00%				0.00%	
Radionuclide	Uranium-238	7440-61-1	pCi/g	600	2	99.67%	0.215	1.11	15.75		1.02	1.77	56	9.33%	337		0.00%				0.00%	
VOC	Chloroform	67-66-3	µg/kg	1166	1048	10.12%	0.46	10,053	3800000		221,823			0.00%	90,270	1	0.09%	No	Chloroform	1	0.09%	Chloroform
VOC	Methylene Chloride	75-09-2	µg/kg	1166	869	25.47%	0.83	6,066	5500000	JB	163,256			0.00%	3.13E+06	1	0.09%	No	Methylene Chloride		0.00%	
VOC	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	1149	1145	0.35%	6	6,663	6100000	J	181,942			0.00%	120,551	1	0.09%	No	1,1,2,2-Tetrachloroethane	1	0.09%	1,1,2,2-Tetrachloroethane
Metal	Chromium (total)	7440-47-3	mg/kg	667	7	98.95%	1.6	16.6	2040	N*	79.4	42.2	12	1.80%	327	1	0.15%	No	Chromium (total)		0.00%	
VOC	Trichloroethene	79-01-6	µg/kg	1165	990	15.02%	0.24	7,463	309000	JE	192,578			0.00%	20,354	4	0.34%	No	Trichloroethene	2	0.17%	Trichloroethene
VOC	Tetrachloroethene	127-18-4	µg/kg	1166	943	19.13%	0.2	14,557	3540000	E	236,194			0.00%	77,111	9	0.77%	No	Tetrachloroethene	3	0.26%	Tetrachloroethene
VOC	Carbon Tetrachloride	56-23-5	µg/kg	1164	1023	12.11%	0.64	240,068	160000000	E	5.31E+06			0.00%	97,124	10	0.86%	No	Carbon Tetrachloride	5	0.43%	Carbon Tetrachloride
PCB	PCB-1260	11096-82-5	µg/kg	278	262	5.76%	79	1,100	70000		7,203			0.00%	15,514	5	1.80%	No	PCB-1260		0.00%	
Radionuclide	Radium-228	15262-20-1	pCi/g	168	0	100.00%	0	1.38	2.78		0.426	2.09	6	3.57%	1.28	6	3.57%	Yes			0.00%	

	The frequency of detection of the analyte concentration above the PRG is greater than (>) 0% and less than (<) 1%
	The frequency of detection of the analyte concentration above the PRG is greater than or equal to (≥) 1% and less than (<) 5%
	The frequency of detection of the analyte concentration above the PRG is greater than or equal to (≥) 5%

Notes:

Chromium (total) is conservatively compared with the Chromium VI PRG.

A Key to laboratory qualifier codes is provided in Table 11.

For analytes with no detections (Percent Detection Frequency = 0%), the Minimum and Maximum Concentration columns contain the minimum and maximum non-detection values.

The Mean Concentration and Standard Deviation columns are calculated based on one-half of all the non-detected values for the analyte, except for radionuclides where all results are used.

The PCBs identfied above under the Standard Name Column are equivalent to Aroclors, for example PCB-1254 is the same as Aroclor-1254.

For radium-228 the Subsurface Background Mean + 2SD value is greater than the WRW PRG. Therefore, only those results greater than both the Subsurface Background Mean +2SD and WRW PRG are reported under AOI Screen 2.

Ra-228 adjusted for Subsurface Background Mean +2SD

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Table 9 Subsurface Soil Summary Statistics > 30.0 and ≤ 50.0 feet

6/28/2005

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
Metal	Aluminum	7429-90-5	mg/kg	150	150	100.00%	925	8,302	23600		3,861	30,392		0.00%	284,902		0.00%				0.00%	
Metal	Antimony	7440-36-0	mg/kg	143	16	11.19%	4	3.86	22.4		2.91	9.78	3	2.10%	511		0.00%				0.00%	
Metal	Arsenic	7440-38-2	mg/kg	150	138	92.00%	0.46	3.57	18.4		2.60	17.5	1	0.67%	27.7		0.00%				0.00%	
Metal	Barium	7440-39-3	mg/kg	150	150	100.00%	15.6	91.9	589		76.0	291	5	3.33%	33,033		0.00%				0.00%	
Metal	Beryllium	7440-41-7	mg/kg	147	105	71.43%	0.26	0.642	1.7		0.314	15.8		0.00%	1,151		0.00%				0.00%	
Metal	Cadmium	7440-43-9	mg/kg	130	15	11.54%	0.35	0.565	24.9		2.17	1.08	8	6.15%	1,051		0.00%				0.00%	
Metal	Chromium	7440-47-3	mg/kg	150	150	100.00%	2.2	12.4	90.5		9.95	42.2	2	1.33%	327		0.00%				0.00%	
Metal	Cobalt	7440-48-4	mg/kg	150	147	98.00%	1.5	6.47	33.8		4.12	15.4	5	3.33%	1,401		0.00%				0.00%	
Metal	Copper	7440-50-8	mg/kg	150	148	98.67%	4.8	15.8	149		13.0	23.8	19	12.67%	51,100		0.00%				0.00%	
Metal	Iron	7439-89-6	mg/kg	150	150	100.00%	1010	12,072	45000		6,855	28,459	5	3.33%	383,250		0.00%				0.00%	
Metal	Lead	7439-92-1	mg/kg	150	149	99.33%	1.4	14.5	378		30.7	26.5	2	1.33%	1,000		0.00%				0.00%	
Metal	Lithium	7439-93-2	mg/kg	147	119	80.95%	0.52	4.96	16.7	B	3.09	20.5		0.00%	25,550		0.00%				0.00%	
Metal	Manganese	7439-96-5	mg/kg	150	150	100.00%	10.7	164	734		127	487	4	2.67%	4,815		0.00%				0.00%	
Metal	Mercury	7439-97-6	mg/kg	147	28	19.05%	0.06	0.052	0.3		0.033	0.488		0.00%	379		0.00%				0.00%	
Metal	Molybdenum	7439-98-7	mg/kg	145	35	24.14%	0.9	1.37	7.4	B	1.28	29.1		0.00%	6,388		0.00%				0.00%	
Metal	Nickel	7440-02-0	mg/kg	150	135	90.00%	3.1	12.9	51		7.95	43.0	1	0.67%	25,550		0.00%				0.00%	
Metal	Selenium	7782-49-2	mg/kg	150	29	19.33%	0.25	0.389	5.8		0.769	1.68	6	4.00%	6,388		0.00%				0.00%	
Metal	Silver	7440-22-4	mg/kg	143	22	15.38%	0.81	0.875	41.2		3.43	26.6	1	0.70%	6,388		0.00%				0.00%	
Metal	Strontium	7440-24-6	mg/kg	150	150	100.00%	6.6	40.6	116		28.9	136		0.00%	766,500		0.00%				0.00%	
Metal	Thallium	7440-28-0	mg/kg	142	49	34.51%	0.22	0.228	0.82		0.140	1.42		0.00%	89.4		0.00%				0.00%	
Metal	Tin	7440-31-5	mg/kg	147	35	23.81%	2.2	10.1	38.7		9.58	354		0.00%	766,500		0.00%				0.00%	
Metal	Vanadium	7440-62-2	mg/kg	150	150	100.00%	7.1	23.3	85.3		11.3	63.3	3	2.00%	1,278		0.00%				0.00%	
Metal	Zinc	7440-66-6	mg/kg	150	150	100.00%	8.1	51.3	1010		83.8	78.3	18	12.00%	383,250		0.00%				0.00%	
Wet Chem	Ammonia	7664-41-7	mg/kg	42	20	47.62%	0.36	1.00	5.82		1.53			0.00%	1.05E+07		0.00%				0.00%	
Wet Chem	Cyanide	57-12-5	mg/kg	87	0	0.00%	0.13	0.507	2.9		0.458			0.00%	25,550		0.00%				0.00%	
Wet Chem	Nitrate / Nitrite	ConID 184	mg/kg	119	68	57.14%	0.1	4.90	505		46.2	4.33	3	2.52%	2.04E+06		0.00%				0.00%	
Herbicide	4-Nitrophenol	100-02-7	µg/kg	103	0	0.00%	360	982	4200		252			0.00%	7.37E+06		0.00%				0.00%	
PCB	PCB-1016	12674-11-2	µg/kg	90	0	0.00%	44	46.4	520		30.0			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1221	11104-28-2	µg/kg	90	0	0.00%	44	45.9	520		29.7			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1232	11141-16-5	µg/kg	90	0	0.00%	44	45.9	520		29.7			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1242	53469-21-9	µg/kg	90	2	2.22%	0	57.1	1300		134			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1248	12672-29-6	µg/kg	90	0	0.00%	44	45.9	520		29.7			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1254	11097-69-1	µg/kg	90	0	0.00%	88	91.2	1000		57.5			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1260	11096-82-5	µg/kg	90	0	0.00%	88	91.2	1000		57.5			0.00%	15,514		0.00%				0.00%	
Pesticide	4,4'-DDD	72-54-8	µg/kg	71	0	0.00%	8.8	9.37	42		3.08			0.00%	178,570		0.00%				0.00%	
Pesticide	4,4'-DDE	72-55-9	µg/kg	71	0	0.00%	8.8	9.37	42		3.08			0.00%	126,049		0.00%				0.00%	
Pesticide	4,4'-DDT	50-29-3	µg/kg	71	0	0.00%	8.8	9.37	42		3.08			0.00%	125,658		0.00%				0.00%	
Pesticide	Aldrin	309-00-2	µg/kg	71	0	0.00%	4.4	4.70	21		1.55			0.00%	2,024		0.00%				0.00%	
Pesticide	alpha-BHC	319-84-6	µg/kg	71	0	0.00%	4.4	4.70	21		1.55			0.00%	6,555		0.00%				0.00%	
Pesticide	alpha-Chlordane	5103-71-9	µg/kg	71	0	0.00%	18	46.5	210		16.2			0.00%	117,997		0.00%				0.00%	
Pesticide	beta-BHC	319-85-7	µg/kg	71	0	0.00%	4.4	4.70	21		1.55			0.00%	22,942		0.00%				0.00%	
Pesticide	beta-Chlordane	5103-74-2	µg/kg	65	0	0.00%	44	46.0	210		14.5			0.00%	117,997		0.00%				0.00%	
Pesticide	delta-BHC	319-86-8	µg/kg	71	0	0.00%	4.4	4.70	21		1.55			0.00%	6,555		0.00%				0.00%	
Pesticide	Dieldrin	60-57-1	µg/kg	71	0	0.00%	8.8	9.37	42		3.08			0.00%	2,151		0.00%				0.00%	
Pesticide	Endosulfan I	959-98-8	µg/kg	71	0	0.00%	4.4	4.70	21		1.55			0.00%	5.53E+06		0.00%				0.00%	
Pesticide	Endosulfan II	33213-65-9	µg/kg	71	0	0.00%	8.8	9.37	42		3.08			0.00%	5.53E+06		0.00%				0.00%	
Pesticide	Endosulfan sulfate	1031-07-8	µg/kg	71	0	0.00%	8.8	9.37	42		3.08			0.00%	5.53E+06		0.00%				0.00%	
Pesticide	Endrin	72-20-8	µg/kg	71	0	0.00%	8.8	9.37	42		3.08			0.00%	276,495		0.00%				0.00%	

*The PRG value for lead is not calculated, but rather is taken from EPA's "Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities (1994)".

Ra-228 adjusted for Subsurface Background Mean + 2SD

Table 9 Subsurface Soil Summary Statistics > 30.0 and ≤ 50.0 feet

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
Pesticide	Endrin ketone	53494-70-5	µg/kg	71	0	0.00%	8.8	9.89	92		5.33			0.00%	383,250		0.00%				0.00%	
Pesticide	gamma-BHC (Lindane)	58-89-9	µg/kg	71	0	0.00%	4.4	4.70	21		1.55			0.00%	31,864		0.00%				0.00%	
Pesticide	gamma-Chlordane	12789-03-6	µg/kg	6	0	0.00%	95	57.7	210		23.2			0.00%	117,997		0.00%				0.00%	
Pesticide	Heptachlor	76-44-8	µg/kg	71	0	0.00%	4.4	4.70	21		1.55			0.00%	7,647		0.00%				0.00%	
Pesticide	Heptachlor epoxide	1024-57-3	µg/kg	71	0	0.00%	4.4	4.70	21		1.55			0.00%	3,782		0.00%				0.00%	
Pesticide	Hexachlorocyclopentadiene	77-47-4	µg/kg	101	0	0.00%	10	199	870		53.6			0.00%	4.38E+06		0.00%				0.00%	
Pesticide	Methoxychlor	72-43-5	µg/kg	71	0	0.00%	18	46.5	210		16.2			0.00%	4.61E+06		0.00%				0.00%	
Pesticide	Toxaphene	8001-35-2	µg/kg	71	0	0.00%	88	93.0	420		31.3			0.00%	31,284		0.00%				0.00%	
SVOC	1,2,4-Trichlorobenzene	120-82-1	µg/kg	104	0	0.00%	1.02	199	870		53.0			0.00%	1.74E+06		0.00%				0.00%	
SVOC	2,4,5-Trichlorophenol	95-95-4	µg/kg	103	0	0.00%	360	967	4200		238			0.00%	9.22E+07		0.00%				0.00%	
SVOC	2,4,6-Trichlorophenol	88-06-2	µg/kg	103	0	0.00%	340	201	870		49.5			0.00%	3.13E+06		0.00%				0.00%	
SVOC	2,4-Dichlorophenol	120-83-2	µg/kg	103	0	0.00%	340	201	870		49.5			0.00%	2.76E+06		0.00%				0.00%	
SVOC	2,4-Dimethylphenol	105-67-9	µg/kg	103	0	0.00%	340	201	870		49.5			0.00%	1.84E+07		0.00%				0.00%	
SVOC	2,4-Dinitrophenol	51-28-5	µg/kg	93	0	0.00%	360	968	4200		219			0.00%	1.84E+06		0.00%				0.00%	
SVOC	2,4-Dinitrotoluene	121-14-2	µg/kg	103	0	0.00%	340	201	870		49.5			0.00%	1.84E+06		0.00%				0.00%	
SVOC	2,6-Dinitrotoluene	606-20-2	µg/kg	103	0	0.00%	340	201	870		49.5			0.00%	921,651		0.00%				0.00%	
SVOC	2-Chloronaphthalene	91-58-7	µg/kg	103	0	0.00%	340	201	870		49.5			0.00%	7.37E+07		0.00%				0.00%	
SVOC	2-Chlorophenol	95-57-8	µg/kg	103	0	0.00%	340	201	870		49.5			0.00%	6.39E+06		0.00%				0.00%	
SVOC	2-Methylnaphthalene	91-57-6	µg/kg	103	0	0.00%	340	201	870		49.5			0.00%	3.69E+06		0.00%				0.00%	
SVOC	2-Methylphenol	95-48-7	µg/kg	103	0	0.00%	340	201	870		49.5			0.00%	4.61E+07		0.00%				0.00%	
SVOC	2-Nitroaniline	88-74-4	µg/kg	103	0	0.00%	360	982	4200		252			0.00%	2.21E+06		0.00%				0.00%	
SVOC	3,3'-Dichlorobenzidine	91-94-1	µg/kg	101	0	0.00%	360	400	1700		101			0.00%	76,667		0.00%				0.00%	
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	µg/kg	103	0	0.00%	360	982	4200		252			0.00%	92,165		0.00%				0.00%	
SVOC	4-Chloroaniline	106-47-8	µg/kg	100	0	0.00%	340	203	1600		72.8			0.00%	3.69E+06		0.00%				0.00%	
SVOC	4-Methylphenol	106-44-5	µg/kg	103	1	0.97%	95	200	95	J	50.6			0.00%	4.61E+06		0.00%				0.00%	
SVOC	4-Nitroaniline	100-01-6	µg/kg	96	0	0.00%	360	987	4200		261			0.00%	2.39E+06		0.00%				0.00%	
SVOC	Acenaphthene	83-32-9	µg/kg	103	1	0.97%	44	198	44	J	47.8			0.00%	5.10E+07		0.00%				0.00%	
SVOC	Anthracene	120-12-7	µg/kg	103	2	1.94%	64	196	72	J	48.8			0.00%	2.55E+08		0.00%				0.00%	
SVOC	Benzo(a)anthracene	56-55-3	µg/kg	103	2	1.94%	130	200	150	J	50.2			0.00%	43,616		0.00%				0.00%	
SVOC	Benzo(a)pyrene	50-32-8	µg/kg	103	7	6.80%	58	199	350	J	57.8			0.00%	4,357		0.00%				0.00%	
SVOC	Benzo(b)fluoranthene	205-99-2	µg/kg	103	4	3.88%	84	199	210	J	51.5			0.00%	43,616		0.00%				0.00%	
SVOC	Benzo(k)fluoranthene	207-08-9	µg/kg	103	2	1.94%	66	197	86	J	55.8			0.00%	436,159		0.00%				0.00%	
SVOC	Benzoic Acid	65-85-0	µg/kg	94	4	4.26%	64	931	610	J	241			0.00%	3.69E+09		0.00%				0.00%	
SVOC	Benzyl Alcohol	100-51-6	µg/kg	99	0	0.00%	10	203	1600		78.7			0.00%	2.76E+08		0.00%				0.00%	
SVOC	bis(2-Chloroethyl) ether	111-44-4	µg/kg	103	0	0.00%	10	199	870		53.1			0.00%	43,315		0.00%				0.00%	
SVOC	bis(2-Chloroisopropyl) ether	108-60-1	µg/kg	91	0	0.00%	10	200	870		56.4			0.00%	681,967		0.00%				0.00%	
SVOC	bis(2-ethylhexyl)phthalate	117-81-7	µg/kg	103	22	21.36%	47	214	420		252			0.00%	2.46E+06		0.00%				0.00%	
SVOC	Butylbenzylphthalate	85-68-7	µg/kg	103	0	0.00%	10	199	870		53.1			0.00%	1.84E+08		0.00%				0.00%	
SVOC	Carbazole	86-74-8	µg/kg	4	0	0.00%	380	196	410		7.50			0.00%	1.73E+06		0.00%				0.00%	
SVOC	Chrysene	218-01-9	µg/kg	103	2	1.94%	140	198	170	J	53.5			0.00%	4.36E+06		0.00%				0.00%	
SVOC	Dibenz(a,h)anthracene	53-70-3	µg/kg	103	0	0.00%	10	199	870		53.1			0.00%	4,362		0.00%				0.00%	
SVOC	Dibenzofuran	132-64-9	µg/kg	103	0	0.00%	10	199	870		53.1			0.00%	2.56E+06		0.00%				0.00%	
SVOC	Diethylphthalate	84-66-2	µg/kg	103	3	2.91%	44	198	230	J	55.4			0.00%	7.37E+08		0.00%				0.00%	
SVOC	Dimethylphthalate	131-11-3	µg/kg	103	0	0.00%	10	199	870		53.1			0.00%	9.22E+09		0.00%				0.00%	
SVOC	Di-n-butylphthalate	84-74-2	µg/kg	103	16	15.53%	39	214	220	J	163			0.00%	9.22E+07		0.00%				0.00%	
SVOC	Di-n-octylphthalate	117-84-0	µg/kg	103	2	1.94%	39	204	60	J	97.6			0.00%	3.69E+07		0.00%				0.00%	
SVOC	Fluoranthene	206-44-0	µg/kg	103	3	2.91%	57	200	370	J	58.6			0.00%	3.40E+07		0.00%				0.00%	
SVOC	Fluorene	86-73-7	µg/kg	103	1	0.97%	44	198	44	J	55.3			0.00%	3.69E+07		0.00%				0.00%	
SVOC	Hexachlorobenzene	118-74-1	µg/kg	103	0	0.00%	10	199	870		53.1			0.00%	21,508		0.00%				0.00%	

Ra-228 adjusted for Subsurface Background Mean + 2SD

Table 9 Subsurface Soil Summary Statistics > 30.0 and ≤ 50.0 feet

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	>1 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
SVOC	Hexachlorobutadiene	87-68-3	µg/kg	104	0	0.00%	1.3	197	870		56.3			0.00%	255,500		0.00%				0.00%	
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	103	0	0.00%	10	199	870		53.1			0.00%	43,616		0.00%				0.00%	
SVOC	Isophorone	78-59-1	µg/kg	103	0	0.00%	10	199	870		53.1			0.00%	3.63E+07		0.00%				0.00%	
SVOC	Naphthalene	91-20-3	µg/kg	104	0	0.00%	0.865	197	870		56.3			0.00%	1.61E+07		0.00%				0.00%	
SVOC	Nitrobenzene	98-95-3	µg/kg	103	0	0.00%	10	199	870		53.1			0.00%	497,333		0.00%				0.00%	
SVOC	N-Nitroso-di-n-propylamine	621-64-7	µg/kg	103	0	0.00%	10	199	870		53.1			0.00%	4,929		0.00%				0.00%	
SVOC	N-nitrosodiphenylamine	86-30-6	µg/kg	103	0	0.00%	10	199	870		53.1			0.00%	7.04E+06		0.00%				0.00%	
SVOC	Pentachlorophenol	87-86-5	µg/kg	103	0	0.00%	50	974	4200		269			0.00%	202,777		0.00%				0.00%	
SVOC	Phenol	108-95-2	µg/kg	103	1	0.97%	60	198	60	J	54.8			0.00%	2.76E+08		0.00%				0.00%	
SVOC	Pyrene	129-00-0	µg/kg	103	3	2.91%	52	202	470		64.6			0.00%	2.55E+07		0.00%				0.00%	
VOC	1,1,1,2-Tetrachloroethane	630-20-6	µg/kg	1	0	0.00%	1.3	0.650	1.3					0.00%	1.05E+06		0.00%				0.00%	
VOC	1,1,1-Trichloroethane	71-55-6	µg/kg	196	3	1.53%	2	5.35	6		25.6			0.00%	1.06E+08		0.00%				0.00%	
VOC	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	183	0	0.00%	1.02	5.37	720		26.4			0.00%	120,551		0.00%				0.00%	
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	µg/kg	1	0	0.00%	1.03	0.515	1.03					0.00%	2.74E+10		0.00%				0.00%	
VOC	1,1,2-Trichloroethane	79-00-5	µg/kg	196	0	0.00%	0.978	5.34	720		25.6			0.00%	322,253		0.00%				0.00%	
VOC	1,1-Dichloroethane	75-34-3	µg/kg	196	0	0.00%	1.04	5.34	720		25.6			0.00%	3.12E+07		0.00%				0.00%	
VOC	1,1-Dichloroethene	75-35-4	µg/kg	196	1	0.51%	1	5.33	1	J	25.6			0.00%	199,706		0.00%				0.00%	
VOC	1,2,3-Trichloropropane	96-18-4	µg/kg	1	0	0.00%	1.09	0.545	1.09					0.00%	23,910		0.00%				0.00%	
VOC	1,2-Dibromo-3-chloropropane	96-12-8	µg/kg	1	0	0.00%	1.9	0.950	1.9					0.00%	34,137		0.00%				0.00%	
VOC	1,2-Dibromoethane	106-93-4	µg/kg	1	0	0.00%	0.866	0.433	0.866					0.00%	403		0.00%				0.00%	
VOC	1,2-Dichlorobenzene	95-50-1	µg/kg	103	0	0.00%	0.771	197	870		49.4			0.00%	3.32E+07		0.00%				0.00%	
VOC	1,2-Dichloroethane	107-06-2	µg/kg	195	0	0.00%	1.05	5.36	720		25.6			0.00%	152,603		0.00%				0.00%	
VOC	1,2-Dichloroethene	540-59-0	µg/kg	190	4	2.11%	1	5.42	4	J	26.0			0.00%	1.15E+07		0.00%				0.00%	
VOC	1,2-Dichloropropane	78-87-5	µg/kg	196	0	0.00%	0.903	5.34	720		25.6			0.00%	441,907		0.00%				0.00%	
VOC	1,3-Dichlorobenzene	541-73-1	µg/kg	104	0	0.00%	1.07	199	870		53.0			0.00%	3.83E+07		0.00%				0.00%	
VOC	1,4-Dichlorobenzene	106-46-7	µg/kg	103	1	0.97%	110	194	110	J	45.4			0.00%	1.05E+06		0.00%				0.00%	
VOC	2-Butanone	78-93-3	µg/kg	157	13	8.28%	2	11.9	78		55.8			0.00%	5.33E+08		0.00%				0.00%	
VOC	4-Methyl-2-pentanone	108-10-1	µg/kg	181	2	1.10%	2	10.6	6	J	51.7			0.00%	9.57E+08		0.00%				0.00%	
VOC	Acetone	67-64-1	µg/kg	188	30	15.96%	4	32.1	650	B	105			0.00%	1.15E+09		0.00%				0.00%	
VOC	Benzene	71-43-2	µg/kg	199	0	0.00%	0.858	5.27	720		25.4			0.00%	270,977		0.00%				0.00%	
VOC	Bromodichloromethane	75-27-4	µg/kg	196	0	0.00%	0.72	5.34	720		25.6			0.00%	771,304		0.00%				0.00%	
VOC	Bromoform	75-25-2	µg/kg	195	0	0.00%	1.17	5.36	720		25.6			0.00%	4.83E+06		0.00%				0.00%	
VOC	Bromomethane	74-83-9	µg/kg	191	0	0.00%	1.68	10.6	1400		50.4			0.00%	241,033		0.00%				0.00%	
VOC	Carbon Disulfide	75-15-0	µg/kg	196	0	0.00%	2.9	5.35	720		25.6			0.00%	1.88E+07		0.00%				0.00%	
VOC	Carbon Tetrachloride	56-23-5	µg/kg	196	14	7.14%	1	7.08	230		30.4			0.00%	97,124		0.00%				0.00%	
VOC	Chlorobenzene	108-90-7	µg/kg	195	0	0.00%	1.04	5.30	720		25.6			0.00%	7.67E+06		0.00%				0.00%	
VOC	Chloroethane	75-00-3	µg/kg	192	0	0.00%	4.09	10.6	1400		50.2			0.00%	1.65E+07		0.00%				0.00%	
VOC	Chloroform	67-66-3	µg/kg	196	21	10.71%	1	6.82	130		27.9			0.00%	90,270		0.00%				0.00%	
VOC	Chloromethane	74-87-3	µg/kg	194	0	0.00%	1.47	10.5	1400		50.0			0.00%	1.32E+06		0.00%				0.00%	
VOC	cis-1,3-Dichloropropene	10061-01-5	µg/kg	196	0	0.00%	0.917	5.34	720		25.6			0.00%	223,462		0.00%				0.00%	
VOC	Dibromochloromethane	124-48-1	µg/kg	196	0	0.00%	0.764	5.34	720		25.6			0.00%	569,296		0.00%				0.00%	
VOC	Dichlorodifluoromethane	75-71-8	µg/kg	1	0	0.00%	1.99	0.995	1.99					0.00%	2.64E+06		0.00%				0.00%	
VOC	Ethylbenzene	100-41-4	µg/kg	198	2	1.01%	2	5.30	17		25.4			0.00%	6.19E+07		0.00%				0.00%	
VOC	Hexachloroethane	67-72-1	µg/kg	103	0	0.00%	10	199	870		53.1			0.00%	1.28E+06		0.00%				0.00%	
VOC	Isopropylbenzene	98-82-8	µg/kg	1	0	0.00%	1.36	0.680	1.36					0.00%	375,823		0.00%				0.00%	
VOC	Methylene Chloride	75-09-2	µg/kg	192	41	21.35%	1	9.97	66	B	54.2			0.00%	3.13E+06		0.00%				0.00%	
VOC	Styrene	100-42-5	µg/kg	195	1	0.51%	47	5.53	47		25.8			0.00%	1.59E+08		0.00%				0.00%	
VOC	Tetrachloroethene	127-18-4	µg/kg	195	31	15.90%	1	6.95	100		27.0			0.00%	77,111		0.00%				0.00%	
VOC	Toluene	108-88-3	µg/kg	211	123	58.29%	1	143	2100	E	331			0.00%	3.56E+07		0.00%				0.00%	

Ra-228 adjusted for Subsurface Background Mean + 2SD

Table 9 Subsurface Soil Summary Statistics > 30.0 and ≤ 50.0 feet

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	>1 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
VOC	trans-1,3-Dichloropropene	10061-02-6	µg/kg	194	0	0.00%	0.98	5.37	720		25.7			0.00%	239,434		0.00%				0.00%	
VOC	Trichloroethene	79-01-6	µg/kg	196	14	7.14%	2	12.0	1100		82.7			0.00%	20,354		0.00%				0.00%	
VOC	Trichlorofluoromethane	75-69-4	µg/kg	1	0	0.00%	1.37	0.685	1.37					0.00%	1.74E+07		0.00%				0.00%	
VOC	Vinyl acetate	108-05-4	µg/kg	182	0	0.00%	10	10.9	1400		51.6			0.00%	3.04E+07		0.00%				0.00%	
VOC	Vinyl Chloride	75-01-4	µg/kg	196	0	0.00%	3.08	10.5	1400		49.7			0.00%	24,948		0.00%				0.00%	
VOC	Xylene	1330-20-7	µg/kg	198	1	0.51%	19	5.32	19		25.5			0.00%	1.22E+07		0.00%				0.00%	
Radionuclide	Americium-241	86954-36-1	pCi/g	127	86	67.72%	-0.002	0.011	0.4725		0.043	0.010	29	22.83%	88.4		0.00%				0.00%	
Radionuclide	Cesium-134	13967-70-9	pCi/g	15	6	40.00%	-0.00636	0.053	0.073		0.035			0.00%	0.910		0.00%				0.00%	
Radionuclide	Cesium-137	10045-97-3	pCi/g	87	72	82.76%	-0.0827	0.034	0.14		0.051	0.143		0.00%	2.54		0.00%				0.00%	
Radionuclide	Plutonium-238	13981-16-3	pCi/g	3	3	100.00%	-0.00122	2.41E-04	0.001942	J	0.002			0.00%	68.7		0.00%				0.00%	
Radionuclide	Plutonium-239/240		pCi/g	130	94	72.31%	-0.0034	0.045	3.112		0.277	0.022	19	14.62%	112		0.00%				0.00%	
Radionuclide	Radium-226	13982-63-3	pCi/g	52	52	100.00%	0.24	0.902	1.7		0.354	1.34	4	7.69%	31.0		0.00%				0.00%	
Radionuclide	Strontium-89/90		pCi/g	93	77	82.80%	-0.017	0.299	6.54		0.714	0.570	5	5.38%	152		0.00%				0.00%	
Radionuclide	Tritium	10028-17-8	pCi/g	5	5	100.00%	14	102	173		72.8			0.00%	288,449		0.00%				0.00%	
Radionuclide	Uranium-233/234		pCi/g	136	136	100.00%	0.4791	1.33	4.05		0.849	2.08	21	15.44%	291		0.00%				0.00%	
Radionuclide	Uranium-235	15117-96-1	pCi/g	136	127	93.38%	-0.0079	0.063	0.22	J	0.048	0.162	7	5.15%	12.1		0.00%				0.00%	
Radionuclide	Uranium-238	7440-61-1	pCi/g	136	136	100.00%	0.5339	1.32	3.82		0.749	1.77	24	17.65%	337		0.00%				0.00%	
Radionuclide	Radium-228	15262-20-1	pCi/g	64	64	100.00%	0.52	1.42	2.1		0.306	2.09	1	1.56%	1.28	1	1.56%	Yes			0.00%	

	The frequency of detection of the analyte concentration above the PRG is greater than (>) 0% and less than (<) 1%
	The frequency of detection of the analyte concentration above the PRG is greater than or equal to (≥) 1% and less than (<) 5%
	The frequency of detection of the analyte concentration above the PRG is greater than or equal to (≥) 5%

Notes:

Chromium (total) is conservatively compared with the Chromium VI PRG.

A Key to laboratory qualifier codes is provided in Table 11.

For analytes with no detections (Percent Detection Frequency = 0%), the Minimum and Maximum Concentration columns contain the minimum and maximum non-detection values.

The Mean Concentration and Standard Deviation columns are calculated based on one-half of all the non-detected values for the analyte, except for radionuclides where all results are used.

The PCBs identfied above under the Standard Name Column are equivalent to Aroclors, for example PCB-1254 is the same as Aroclor-1254.

For radium-228 the Subsurface Background Mean + 2SD value is greater than the WRW PRG. Therefore, only those results greater than both the Subsurface Background Mean +2SD and WRW PRG are reported under AOI Screen 2.

Ra-228 adjusted for Subsurface Background Mean + 2SD

Table 10 Subsurface Soil Summary Statistics > 50.0 feet

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
Metal	Aluminum	7429-90-5	mg/kg	57	57	100.00%	2160	8,027	14400	*	2,543	30,392		0.00%	284,902		0.00%				0.00%	
Metal	Antimony	7440-36-0	mg/kg	52	3	5.77%	3.5	3.97	6.1		2.80	9.78		0.00%	511		0.00%				0.00%	
Metal	Arsenic	7440-38-2	mg/kg	57	56	98.25%	1.1	3.54	14		2.31	17.5		0.00%	27.7		0.00%				0.00%	
Metal	Barium	7440-39-3	mg/kg	57	57	100.00%	22	90.6	671		91.6	291	2	3.51%	33,033		0.00%				0.00%	
Metal	Beryllium	7440-41-7	mg/kg	56	48	85.71%	0.29	0.665	1.6		0.294	15.8		0.00%	1,151		0.00%				0.00%	
Metal	Cadmium	7440-43-9	mg/kg	54	7	12.96%	0.34	0.460	1.1		0.248	1.08	1	1.85%	1,051		0.00%				0.00%	
Metal	Chromium	7440-47-3	mg/kg	57	57	100.00%	3.7	11.3	28.6		4.57	42.2		0.00%	327		0.00%				0.00%	
Metal	Cobalt	7440-48-4	mg/kg	57	57	100.00%	1.6	6.32	18.4		3.23	15.4	1	1.75%	1,401		0.00%				0.00%	
Metal	Copper	7440-50-8	mg/kg	57	55	96.49%	2.6	12.8	25.8		5.69	23.8	2	3.51%	51,100		0.00%				0.00%	
Metal	Iron	7439-89-6	mg/kg	57	57	100.00%	2040	12,704	56500		8,252	28,459	2	3.51%	383,250		0.00%				0.00%	
Metal	Lead	7439-92-1	mg/kg	57	57	100.00%	2.2	10.3	33.6		6.89	26.5	1	1.75%	1000*		0.00%				0.00%	
Metal	Lithium	7439-93-2	mg/kg	56	46	82.14%	0.85	5.62	13.5	B	2.58	20.5		0.00%	25,550		0.00%				0.00%	
Metal	Manganese	7439-96-5	mg/kg	57	57	100.00%	5	199	1160		182	487	4	7.02%	4,815		0.00%				0.00%	
Metal	Mercury	7439-97-6	mg/kg	56	6	10.71%	0.07	0.047	0.13		0.022	0.488		0.00%	379		0.00%				0.00%	
Metal	Molybdenum	7439-98-7	mg/kg	53	7	13.21%	0.97	1.56	5.3	B	1.04	29.1		0.00%	6,388		0.00%				0.00%	
Metal	Nickel	7440-02-0	mg/kg	57	48	84.21%	4	10.4	23.8		5.30	43.0		0.00%	25,550		0.00%				0.00%	
Metal	Selenium	7782-49-2	mg/kg	56	15	26.79%	0.31	0.369	2.9		0.483	1.68	2	3.57%	6,388		0.00%				0.00%	
Metal	Silver	7440-22-4	mg/kg	54	9	16.67%	0.87	0.653	3.8		0.614	26.6		0.00%	6,388		0.00%				0.00%	
Metal	Strontium	7440-24-6	mg/kg	57	57	100.00%	6	38.5	138		34.2	136	1	1.75%	766,500		0.00%				0.00%	
Metal	Thallium	7440-28-0	mg/kg	54	17	31.48%	0.21	0.294	3.5	N*	0.473	1.42	1	1.85%	89.4		0.00%				0.00%	
Metal	Tin	7440-31-5	mg/kg	56	17	30.36%	2.5	11.3	69.7		13.0	354		0.00%	766,500		0.00%				0.00%	
Metal	Vanadium	7440-62-2	mg/kg	57	57	100.00%	6.1	22.8	49.7		8.45	63.3		0.00%	1,278		0.00%				0.00%	
Metal	Zinc	7440-66-6	mg/kg	57	51	89.47%	11.5	40.7	200		37.4	78.3	6	10.53%	383,250		0.00%				0.00%	
Wet Chem	Ammonia	7664-41-7	mg/kg	8	7	87.50%	0.476	3.04	6.83		2.43			0.00%	1.05E+07		0.00%				0.00%	
Wet Chem	Cyanide	57-12-5	mg/kg	25	0	0.00%	0.535	0.967	2.9		0.526			0.00%	25,550		0.00%				0.00%	
Wet Chem	Nitrate / Nitrite	ConID 184	mg/kg	37	18	48.65%	0.1	0.350	0.902		0.203	4.33		0.00%	2.04E+06		0.00%				0.00%	
Herbicide	4-Nitrophenol	100-02-7	µg/kg	34	0	0.00%	1700	984	4300		250			0.00%	7.37E+06		0.00%				0.00%	
PCB	PCB-1016	12674-11-2	µg/kg	19	0	0.00%	44	43.3	210		22.1			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1221	11104-28-2	µg/kg	19	0	0.00%	44	43.3	210		22.1			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1232	11141-16-5	µg/kg	19	0	0.00%	44	43.3	210		22.1			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1242	53469-21-9	µg/kg	19	0	0.00%	44	43.3	210		22.1			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1248	12672-29-6	µg/kg	19	0	0.00%	44	43.3	210		22.1			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1254	11097-69-1	µg/kg	19	0	0.00%	89	87.1	430		44.9			0.00%	15,514		0.00%				0.00%	
PCB	PCB-1260	11096-82-5	µg/kg	19	0	0.00%	89	87.1	430		44.9			0.00%	15,514		0.00%				0.00%	
Pesticide	4,4'-DDD	72-54-8	µg/kg	16	0	0.00%	8.9	9.47	43		4.50			0.00%	178,570		0.00%				0.00%	

*The PRG value for lead is not calculated, but rather is taken from EPA's "Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities (1994)".

Ra-228 adjusted for Subsurface Background Mean +2SD

Table 10 Subsurface Soil Summary Statistics > 50.0 feet

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
Pesticide	4,4'-DDE	72-55-9	µg/kg	16	0	0.00%	8.9	9.47	43		4.50			0.00%	126,049		0.00%				0.00%	
Pesticide	4,4'-DDT	50-29-3	µg/kg	16	0	0.00%	8.9	9.47	43		4.50			0.00%	125,658		0.00%				0.00%	
Pesticide	Aldrin	309-00-2	µg/kg	16	0	0.00%	4.4	4.71	21		2.21			0.00%	2,024		0.00%				0.00%	
Pesticide	alpha-BHC	319-84-6	µg/kg	16	0	0.00%	4.4	4.71	21		2.21			0.00%	6,555		0.00%				0.00%	
Pesticide	alpha-Chlordane	5103-71-9	µg/kg	16	0	0.00%	44	47.1	210		22.1			0.00%	117,997		0.00%				0.00%	
Pesticide	beta-BHC	319-85-7	µg/kg	16	0	0.00%	4.4	4.71	21		2.21			0.00%	22,942		0.00%				0.00%	
Pesticide	beta-Chlordane	5103-74-2	µg/kg	13	0	0.00%	44	47.0	210		24.7			0.00%	117,997		0.00%				0.00%	
Pesticide	delta-BHC	319-86-8	µg/kg	16	0	0.00%	4.4	4.71	21		2.21			0.00%	6,555		0.00%				0.00%	
Pesticide	Dieldrin	60-57-1	µg/kg	16	0	0.00%	8.9	9.47	43		4.50			0.00%	2,151		0.00%				0.00%	
Pesticide	Endosulfan I	959-98-8	µg/kg	16	0	0.00%	4.4	4.71	21		2.21			0.00%	5.53E+06		0.00%				0.00%	
Pesticide	Endosulfan II	33213-65-9	µg/kg	16	0	0.00%	8.9	9.47	43		4.50			0.00%	5.53E+06		0.00%				0.00%	
Pesticide	Endosulfan sulfate	1031-07-8	µg/kg	16	0	0.00%	8.9	9.47	43		4.50			0.00%	5.53E+06		0.00%				0.00%	
Pesticide	Endrin	72-20-8	µg/kg	16	0	0.00%	8.9	9.47	43		4.50			0.00%	276,495		0.00%				0.00%	
Pesticide	Endrin ketone	53494-70-5	µg/kg	16	0	0.00%	8.9	9.47	43		4.50			0.00%	383,250		0.00%				0.00%	
Pesticide	gamma-BHC (Lindane)	58-89-9	µg/kg	16	0	0.00%	4.4	4.71	21		2.21			0.00%	31,864		0.00%				0.00%	
Pesticide	gamma-Chlordane	12789-03-6	µg/kg	3	0	0.00%	94	47.5	96		0.500			0.00%	117,997		0.00%				0.00%	
Pesticide	Heptachlor	76-44-8	µg/kg	16	0	0.00%	4.4	4.71	21		2.21			0.00%	7,647		0.00%				0.00%	
Pesticide	Heptachlor epoxide	1024-57-3	µg/kg	16	0	0.00%	4.4	4.71	21		2.21			0.00%	3,782		0.00%				0.00%	
Pesticide	Hexachlorocyclopentadiene	77-47-4	µg/kg	34	0	0.00%	350	199	890		52.8			0.00%	4.38E+06		0.00%				0.00%	
Pesticide	Methoxychlor	72-43-5	µg/kg	16	0	0.00%	44	47.1	210		22.1			0.00%	4.61E+06		0.00%				0.00%	
Pesticide	Toxaphene	8001-35-2	µg/kg	16	0	0.00%	89	94.7	430		45.0			0.00%	31,284		0.00%				0.00%	
SVOC	1,2,4-Trichlorobenzene	120-82-1	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	1.74E+06		0.00%				0.00%	
SVOC	2,4,5-Trichlorophenol	95-95-4	µg/kg	35	0	0.00%	1700	981	4300		247			0.00%	9.22E+07		0.00%				0.00%	
SVOC	2,4,6-Trichlorophenol	88-06-2	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	3.13E+06		0.00%				0.00%	
SVOC	2,4-Dichlorophenol	120-83-2	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	2.76E+06		0.00%				0.00%	
SVOC	2,4-Dimethylphenol	105-67-9	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	1.84E+07		0.00%				0.00%	
SVOC	2,4-Dinitrophenol	51-28-5	µg/kg	33	0	0.00%	1700	986	4300		254			0.00%	1.84E+06		0.00%				0.00%	
SVOC	2,4-Dinitrotoluene	121-14-2	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	1.84E+06		0.00%				0.00%	
SVOC	2,6-Dinitrotoluene	606-20-2	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	921,651		0.00%				0.00%	
SVOC	2-Chloronaphthalene	91-58-7	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	7.37E+07		0.00%				0.00%	
SVOC	2-Chlorophenol	95-57-8	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	6.39E+06		0.00%				0.00%	
SVOC	2-Methylnaphthalene	91-57-6	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	3.69E+06		0.00%				0.00%	
SVOC	2-Methylphenol	95-48-7	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	4.61E+07		0.00%				0.00%	
SVOC	2-Nitroaniline	88-74-4	µg/kg	35	0	0.00%	1700	981	4300		247			0.00%	2.21E+06		0.00%				0.00%	
SVOC	3,3'-Dichlorobenzidine	91-94-1	µg/kg	35	0	0.00%	690	397	1800		106			0.00%	76,667		0.00%				0.00%	
SVOC	4,6-Dinitro-2-methylphenol	534-52-1	µg/kg	35	0	0.00%	1700	981	4300		247			0.00%	92,165		0.00%				0.00%	

Ra-228 adjusted for Subsurface Background Mean +2SD

Table 10 Subsurface Soil Summary Statistics > 50.0 feet

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
SVOC	4-Chloroaniline	106-47-8	µg/kg	34	0	0.00%	350	199	890		52.9			0.00%	3.69E+06		0.00%				0.00%	
SVOC	4-Methylphenol	106-44-5	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	4.61E+06		0.00%				0.00%	
SVOC	4-Nitroaniline	100-01-6	µg/kg	33	0	0.00%	1700	986	4300		254			0.00%	2.39E+06		0.00%				0.00%	
SVOC	Acenaphthene	83-32-9	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	5.10E+07		0.00%				0.00%	
SVOC	Anthracene	120-12-7	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	2.55E+08		0.00%				0.00%	
SVOC	Benzo(a)anthracene	56-55-3	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	43,616		0.00%				0.00%	
SVOC	Benzo(a)pyrene	50-32-8	µg/kg	35	6	17.14%	44	201	480	J	79.0			0.00%	4,357		0.00%				0.00%	
SVOC	Benzo(b)fluoranthene	205-99-2	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	43,616		0.00%				0.00%	
SVOC	Benzo(k)fluoranthene	207-08-9	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	436,159		0.00%				0.00%	
SVOC	Benzoic Acid	65-85-0	µg/kg	33	0	0.00%	1700	986	4300		254			0.00%	3.69E+09		0.00%				0.00%	
SVOC	Benzyl Alcohol	100-51-6	µg/kg	33	0	0.00%	350	192	700		30.6			0.00%	2.76E+08		0.00%				0.00%	
SVOC	bis(2-Chloroethyl) ether	111-44-4	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	43,315		0.00%				0.00%	
SVOC	bis(2-Chloroisopropyl) ether	108-60-1	µg/kg	30	0	0.00%	350	201	890		56.2			0.00%	681,967		0.00%				0.00%	
SVOC	bis(2-ethylhexyl)phthalate	117-81-7	µg/kg	35	8	22.86%	47	172	260	J	43.3			0.00%	2.46E+06		0.00%				0.00%	
SVOC	Butylbenzylphthalate	85-68-7	µg/kg	35	1	2.86%	190	202	190	J	64.8			0.00%	1.84E+08		0.00%				0.00%	
SVOC	Carbazole	86-74-8	µg/kg	1	0	0.00%	370	185	370					0.00%	1.73E+06		0.00%				0.00%	
SVOC	Chrysene	218-01-9	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	4.36E+06		0.00%				0.00%	
SVOC	Dibenz(a,h)anthracene	53-70-3	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	4,362		0.00%				0.00%	
SVOC	Dibenzofuran	132-64-9	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	2.56E+06		0.00%				0.00%	
SVOC	Diethylphthalate	84-66-2	µg/kg	35	2	5.71%	47	191	63	J	62.2			0.00%	7.37E+08		0.00%				0.00%	
SVOC	Dimethylphthalate	131-11-3	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	9.22E+09		0.00%				0.00%	
SVOC	Di-n-butylphthalate	84-74-2	µg/kg	35	9	25.71%	59	200	510		88.1			0.00%	9.22E+07		0.00%				0.00%	
SVOC	Di-n-octylphthalate	117-84-0	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	3.69E+07		0.00%				0.00%	
SVOC	Fluoranthene	206-44-0	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	3.40E+07		0.00%				0.00%	
SVOC	Fluorene	86-73-7	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	3.69E+07		0.00%				0.00%	
SVOC	Hexachlorobenzene	118-74-1	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	21,508		0.00%				0.00%	
SVOC	Hexachlorobutadiene	87-68-3	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	255,500		0.00%				0.00%	
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	43,616		0.00%				0.00%	
SVOC	Isophorone	78-59-1	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	3.63E+07		0.00%				0.00%	
SVOC	Naphthalene	91-20-3	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	1.61E+07		0.00%				0.00%	
SVOC	Nitrobenzene	98-95-3	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	497,333		0.00%				0.00%	
SVOC	N-Nitroso-di-n-propylamine	621-64-7	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	4,929		0.00%				0.00%	
SVOC	N-nitrosodiphenylamine	86-30-6	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	7.04E+06		0.00%				0.00%	
SVOC	Pentachlorophenol	87-86-5	µg/kg	35	0	0.00%	1700	981	4300		247			0.00%	202,777		0.00%				0.00%	
SVOC	Phenol	108-95-2	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	2.76E+08		0.00%				0.00%	
SVOC	Pyrene	129-00-0	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	2.55E+07		0.00%				0.00%	

Ra-228 adjusted for Subsurface Background Mean +2SD

Table 10 Subsurface Soil Summary Statistics > 50.0 feet

6/28/2005

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
VOC	1,1,1-Trichloroethane	71-55-6	µg/kg	120	1	0.83%	6	13.4	6	J	55.6			0.00%	1.06E+08		0.00%				0.00%	
VOC	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	114	0	0.00%	5	13.8	730		57.0			0.00%	120,551		0.00%				0.00%	
VOC	1,1,2-Trichloroethane	79-00-5	µg/kg	120	0	0.00%	5	13.4	730		55.6			0.00%	322,253		0.00%				0.00%	
VOC	1,1-Dichloroethane	75-34-3	µg/kg	120	0	0.00%	5	13.4	730		55.6			0.00%	3.12E+07		0.00%				0.00%	
VOC	1,1-Dichloroethene	75-35-4	µg/kg	120	1	0.83%	3	13.4	3	J	55.6			0.00%	199,706		0.00%				0.00%	
VOC	1,2-Dichlorobenzene	95-50-1	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	3.32E+07		0.00%				0.00%	
VOC	1,2-Dichloroethane	107-06-2	µg/kg	120	0	0.00%	5	13.4	730		55.6			0.00%	152,603		0.00%				0.00%	
VOC	1,2-Dichloroethene	540-59-0	µg/kg	118	3	2.54%	2	13.6	11	J	56.1			0.00%	1.15E+07		0.00%				0.00%	
VOC	1,2-Dichloropropane	78-87-5	µg/kg	120	0	0.00%	5	13.4	730		55.6			0.00%	441,907		0.00%				0.00%	
VOC	1,3-Dichlorobenzene	541-73-1	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	3.83E+07		0.00%				0.00%	
VOC	1,4-Dichlorobenzene	106-46-7	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	1.05E+06		0.00%				0.00%	
VOC	2-Butanone	78-93-3	µg/kg	104	14	13.46%	2	10.1	63		10.1			0.00%	5.33E+08		0.00%				0.00%	
VOC	4-Methyl-2-pentanone	108-10-1	µg/kg	109	4	3.67%	3	28.6	21	J	117			0.00%	9.57E+08		0.00%				0.00%	
VOC	Acetone	67-64-1	µg/kg	130	15	11.54%	3	105	1400	BD	418			0.00%	1.15E+09		0.00%				0.00%	
VOC	Benzene	71-43-2	µg/kg	121	2	1.65%	10	13.7	14	J	55.4			0.00%	270,977		0.00%				0.00%	
VOC	Bromodichloromethane	75-27-4	µg/kg	120	0	0.00%	5	13.7	730		55.6			0.00%	771,304		0.00%				0.00%	
VOC	Bromoform	75-25-2	µg/kg	120	0	0.00%	5	13.7	730		55.6			0.00%	4.83E+06		0.00%				0.00%	
VOC	Bromomethane	74-83-9	µg/kg	120	0	0.00%	10	26.7	1500		111			0.00%	241,033		0.00%				0.00%	
VOC	Carbon Disulfide	75-15-0	µg/kg	120	1	0.83%	4	13.4	4	J	55.6			0.00%	1.88E+07		0.00%				0.00%	
VOC	Carbon Tetrachloride	56-23-5	µg/kg	119	2	1.68%	2	14.3	110		56.5			0.00%	97,124		0.00%				0.00%	
VOC	Chlorobenzene	108-90-7	µg/kg	120	1	0.83%	11	13.4	11	J	55.6			0.00%	7.67E+06		0.00%				0.00%	
VOC	Chloroethane	75-00-3	µg/kg	118	0	0.00%	10	27.0	1500		112			0.00%	1.65E+07		0.00%				0.00%	
VOC	Chloroform	67-66-3	µg/kg	133	56	42.11%	2	18.2	96		54.0			0.00%	90,270		0.00%				0.00%	
VOC	Chloromethane	74-87-3	µg/kg	120	0	0.00%	10	26.7	1500		111			0.00%	1.32E+06		0.00%				0.00%	
VOC	cis-1,3-Dichloropropene	10061-01-5	µg/kg	120	0	0.00%	5	13.4	730		55.6			0.00%	223,462		0.00%				0.00%	
VOC	Dibromochloromethane	124-48-1	µg/kg	120	0	0.00%	5	13.4	730		55.6			0.00%	569,296		0.00%				0.00%	
VOC	Ethylbenzene	100-41-4	µg/kg	120	0	0.00%	5	13.4	730		55.6			0.00%	6.19E+07		0.00%				0.00%	
VOC	Hexachloroethane	67-72-1	µg/kg	35	0	0.00%	350	199	890		52.2			0.00%	1.28E+06		0.00%				0.00%	
VOC	Methylene Chloride	75-09-2	µg/kg	132	23	17.42%	2	22.8	190	BD	89.1			0.00%	3.13E+06		0.00%				0.00%	
VOC	Styrene	100-42-5	µg/kg	120	0	0.00%	5	13.4	730		55.6			0.00%	1.59E+08		0.00%				0.00%	
VOC	Tetrachloroethene	127-18-4	µg/kg	120	24	20.00%	1	16.3	93		56.7			0.00%	77,111		0.00%				0.00%	
VOC	Toluene	108-88-3	µg/kg	131	59	45.04%	1	87.3	3100		374			0.00%	3.56E+07		0.00%				0.00%	
VOC	trans-1,3-Dichloropropene	10061-02-6	µg/kg	120	0	0.00%	5	13.4	730		55.6			0.00%	239,434		0.00%				0.00%	
VOC	Trichloroethene	79-01-6	µg/kg	121	37	30.58%	2	87.0	3500	E	368			0.00%	20,354		0.00%				0.00%	
VOC	Vinyl acetate	108-05-4	µg/kg	119	0	0.00%	10	26.9	1500		112			0.00%	3.04E+07		0.00%				0.00%	
VOC	Vinyl Chloride	75-01-4	µg/kg	120	0	0.00%	10	26.7	1500		111			0.00%	24,948		0.00%				0.00%	

Ra-228 adjusted for Subsurface Background Mean +2SD

Table 10 Subsurface Soil Summary Statistics > 50.0 feet

Group	Standard Name	Derived CAS	Derived Unit	Number of Sample Results	Number of Detections	Percent Detection Frequency	Minimum Concentration	Mean Concentration	AOI Screen 1						AOI Screen 2			AOI Screen 3	Subsurface Soil AOIs	Number of Results ≥ 10xPRG	Percent ≥ 10xPRG	≥ 10xPRG Analytes
									Maximum Concentration	Lab Qualifier for Maximum Conc.	Standard Deviation	Background Mean + 2SD	Number of Results > Background Mean +2SD	Percent Results > Background Mean +2SD	PRG	Number of Results ≥ PRG	Percent ≥ PRG	Eliminated By Process Knowledge				
VOC	Xylene	1330-20-7	µg/kg	124	8	6.45%	3	13.2	21	J	54.7			0.00%	1.22E+07		0.00%				0.00%	
Radionuclide	Americium-241	86954-36-1	pCi/g	55	39	70.91%	-3E-04	0.027	0.39		0.066	0.010	21	38.18%	88.4		0.00%				0.00%	
Radionuclide	Cesium-134	13967-70-9	pCi/g	3	1	33.33%	-0.046	-0.014	-0.046	J	0.028			0.00%	0.910		0.00%				0.00%	
Radionuclide	Cesium-137	10045-97-3	pCi/g	16	13	81.25%	-0.04	0.010	0.097		0.040	0.143		0.00%	2.54		0.00%				0.00%	
Radionuclide	Plutonium-238	13981-16-3	pCi/g	4	4	100.00%	-0.003	-3.08E-05	0.0017	J	0.002			0.00%	68.7		0.00%				0.00%	
Radionuclide	Plutonium-239/240		pCi/g	50	38	76.00%	0	0.026	0.455		0.067	0.022	14	28.00%	112		0.00%				0.00%	
Radionuclide	Radium-226	13982-63-3	pCi/g	6	6	100.00%	-2.13	0.473	1.226		1.29	1.34		0.00%	31.0		0.00%				0.00%	
Radionuclide	Radium-228	15262-20-1	pCi/g	10	10	100.00%	1	1.48	2		0.286	2.09		0.00%	1.28		0.00%				0.00%	
Radionuclide	Strontium-89/90		pCi/g	19	17	89.47%	0.024	0.239	1.06		0.255	0.570	2	10.53%	152		0.00%				0.00%	
Radionuclide	Tritium	10028-17-8	pCi/g	1	1	100.00%	152	152	152					0.00%	288,449		0.00%				0.00%	
Radionuclide	Uranium-233/234		pCi/g	53	53	100.00%	0.578	2.01	6	B	1.22	2.08	23	43.40%	291		0.00%				0.00%	
Radionuclide	Uranium-235	15117-96-1	pCi/g	53	51	96.23%	0.0114	0.090	0.3		0.066	0.162	11	20.75%	12.1		0.00%				0.00%	
Radionuclide	Uranium-238	7440-61-1	pCi/g	53	53	100.00%	0.6219	1.96	6.1	B	1.22	1.77	23	43.40%	337		0.00%				0.00%	

	The frequency of detection of the analyte concentration above the PRG is greater than (>) 0% and less than (<) 1%
	The frequency of detection of the analyte concentration above the PRG is greater than or equal to (≥) 1% and less than (<) 5%
	The frequency of detection of the analyte concentration above the PRG is greater than or equal to (≥) 5%

Notes:

Chromium (total) is conservatively compared with the Chromium VI PRG.

A Key to laboratory qualifier codes is provided in Table 11.

For analytes with no detections (Percent Detection Frequency = 0%), the Minimum and Maximum Concentration columns contain the minimum and maximum non-detection values.

The Mean Concentration and Standard Deviation columns are calculated based on one-half of all the non-detected values for the analyte, except for radionuclides where all results are used.

The PCBs identfied above under the Standard Name Column are equivalent to Aroclors, for example PCB-1254 is the same as Aroclor-1254.

For radium-228 the Subsurface Background Mean + 2SD value is greater than the WRW PRG. Therefore, only those results greater than both the Subsurface Background Mean +2SD and WRW PRG are reported under AOI Screen 2.

Ra-228 adjusted for Subsurface Background Mean +2SD

Table 11: Laboratory Qualifier Codes

Laboratory Qualifier Code	Explanation
B	Organics (Volatiles, Semivolatiles, Pesticides/PCBs) indicates analyte was in both the sample and associated method blank.
B	Inorganics (Metals and other inorganics) detected concentration was less than contract required detection limit (CRDL) and above instrument detection limit (IDL).
B	Radionuclides- The activity in the method blank exceeded the minimal detectable activity (MDA).
D	Organics – Analysis was performed, extract diluted.
E	Organics- Chemical concentration exceeds calibration range of the instrument.
E	Inorganics- Reported value is estimated due to interference.
I	Interference (result estimated)
J	Organics – Positively identified below sample quantitation limit (SQL) – result is estimated.
J	Inorganics and Radionuclides – estimated quantification
N	Metals – Spike recoveries in the matrix spike sample did not meet advisory limits.
P	Organics – Low value, >25 percent Difference between two GC columns.
S	Determined by Method of Standard Additions (MSA)
X	Inorganics – detection limit raised, matrix interference.
X	General Radiochemistry and Routine Analytical Services Protocol (GRRASP) – Result by calculation.
*	Organics – Outside contract required QC limits.
*	Metals – Matrix duplicate analysis did not meet advisory limits.

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Table 12 List of Analytes With Results Greater Than PRGs by Depth Interval

6/28/2005

Type	Group	Standard Name	Derived CAS	Derived Unit	Table 4 Surface (≤ 0.5 ft*) *End Depth	Table 5 Subsurface (> 0.5 & ≤ 3 ft)	Table 6 Subsurface (> 3 & ≤ 8 ft)	Table 7 Subsurface (> 8 & ≤ 12 ft)	Table 8 Subsurface (> 12 & ≤ 30 ft)	Table 9 Subsurface (> 30 & ≤ 50 ft)	Table 10 Subsurface (> 50 ft)
Inorganic	Metal	Aluminum	7429-90-5	mg/kg	105						
Inorganic	Metal	Antimony	7440-36-0	mg/kg	2						
Inorganic	Metal	Arsenic	7440-38-2	mg/kg	71	6	4	2			
Inorganic	Metal	Cadmium	7440-43-9	mg/kg	1						
Inorganic	Metal	Chromium (total)	7440-47-3	mg/kg	149	1	4	1	1		
Inorganic	Metal	Lead	7439-92-1	mg/kg		3	1				
Inorganic	Metal	Uranium (total)		mg/kg	1						
Inorganic	Metal	Vanadium	7440-62-2	mg/kg	12						
Organic	PCB	PCB-1016	12674-11-2	µg/kg				1			
Organic	PCB	PCB-1254	11097-69-1	µg/kg	21	2	8	6			
Organic	PCB	PCB-1260	11096-82-5	µg/kg	17	1	4	3	5		
Organic	SVOC	Benzo(a)anthracene	56-55-3	µg/kg	12			1			
Organic	SVOC	Benzo(a)pyrene	50-32-8	µg/kg	198	6	5	5			
Organic	SVOC	Benzo(b)fluoranthene	205-99-2	µg/kg	14			1			
Organic	SVOC	Dibenz(a,h)anthracene	53-70-3	µg/kg	27	1					
Organic	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	4						
Organic	SVOC	Pentachlorophenol	87-86-5	µg/kg	1						
Organic	VOC	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg					1		
Organic	VOC	Carbon Tetrachloride	56-23-5	µg/kg					10		
Organic	VOC	Chloroform	67-66-3	µg/kg					1		
Organic	VOC	Methylene Chloride	75-09-2	µg/kg					1		
Organic	VOC	Tetrachloroethene	127-18-4	µg/kg	2	5	23	12	9		
Organic	VOC	Trichloroethene	79-01-6	µg/kg	1	3	10	7	4		
Radionuclide	Radionuclide	Americium-241	86954-36-1	pCi/g	40	3	3				
Radionuclide	Radionuclide	Plutonium-239/240		pCi/g	127	4	9	2			
Radionuclide	Radionuclide	Uranium-233/234		pCi/g	2						
Radionuclide	Radionuclide	Uranium-235	15117-96-1	pCi/g	3		3	2			
Radionuclide	Radionuclide	Uranium-238	7440-61-1	pCi/g	6		4	2			

	The frequency of detection of the analyte concentration above the PRG is greater than (>) 0% and less than (<) 1%
	The frequency of detection of the analyte concentration above the PRG is greater than or equal to (≥) 1% and less than (<) 5%
	The frequency of detection of the analyte concentration above the PRG is greater than or equal to (≥) 5%

Note: Chromium (total) is conservatively compared with the Chromium VI PRG.

Table 13 List of Analytes With Results Greater Than 10xPRG by Depth Interval

Type	Group	Derived Name	Derived CAS	Derived Unit	Table 4 Surface (≤ 0.5 ft*) *End Depth	Table 5 Subsurface (> 0.5 & ≤ 3 ft)	Table 6 Subsurface (> 3 & ≤ 8 ft)	Table 7 Subsurface (> 8 & ≤ 12 ft)	Table 8 Subsurface (> 12 & ≤ 30 ft)	Table 9 Subsurface (> 30 & ≤ 50 ft)	Table 10 Subsurface (> 50 ft)
Inorganic	Metal	Arsenic	7440-38-2	mg/kg	5						
Inorganic	Metal	Chromium (total)	7440-47-3	mg/kg			2	1			
Inorganic	Metal	Vanadium	7440-62-2	mg/kg	6						
Organic	PCB	PCB-1254	11097-69-1	µg/kg			1	1			
Organic	SVOC	Benzo(a)pyrene	50-32-8	µg/kg	12						
Organic	VOC	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg					1		
Organic	VOC	Carbon Tetrachloride	56-23-5	µg/kg					5		
Organic	VOC	Chloroform	67-66-3	µg/kg					1		
Organic	VOC	Tetrachloroethene	127-18-4	µg/kg		1	10	6	3		
Organic	VOC	Trichloroethene	79-01-6	µg/kg			2	3	2		
Radionuclide	Radionuclide	Americium-241	86954-36-1	pCi/g	8	1					
Radionuclide	Radionuclide	Plutonium-239/240		pCi/g	16	2	2				

	The frequency of detection of the analyte concentration above the PRG is greater than (>) 0% and less than (<) 1%
	The frequency of detection of the analyte concentration above the PRG is greater than or equal to (≥) 1% and less than (<) 5%
	The frequency of detection of the analyte concentration above the PRG is greater than or equal to (≥) 5%

Note: Chromium (total) is conservatively compared with the Chromium (VI) PRG.

FIGURES

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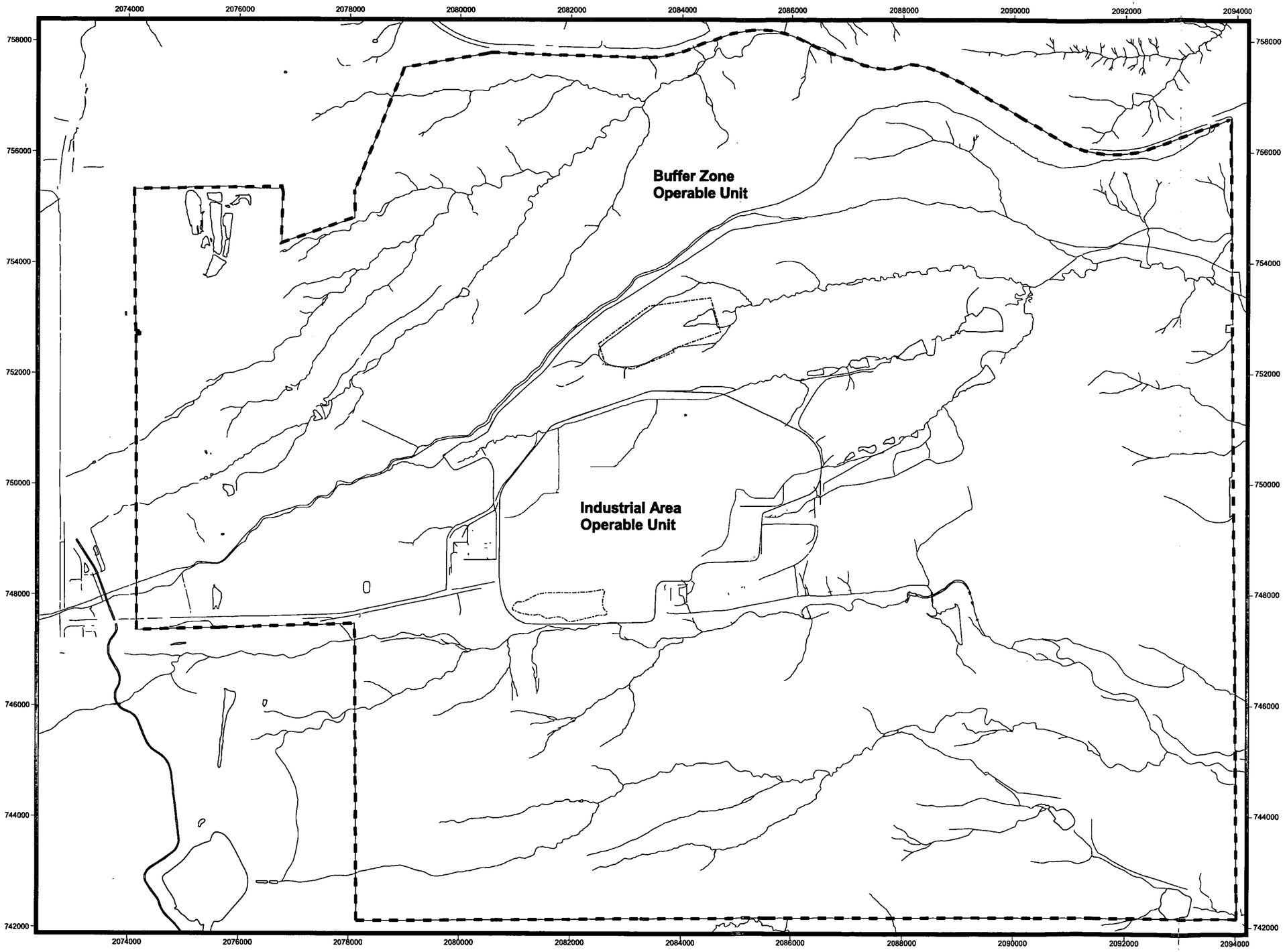

Figure 1

Operable Units

Legend

- Industrial Area OU
- Buffer Zone OU
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data Set: 04/27/05

N
W
E
S

500 0 500 1000 Feet

Scale = 1 : 22,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by:

Date: June 30, 2005

Prepared for:

KAISER•HILL
COMPANY

File: W:\Projects\FY2005\RI-FS\Nature_&_Extent\
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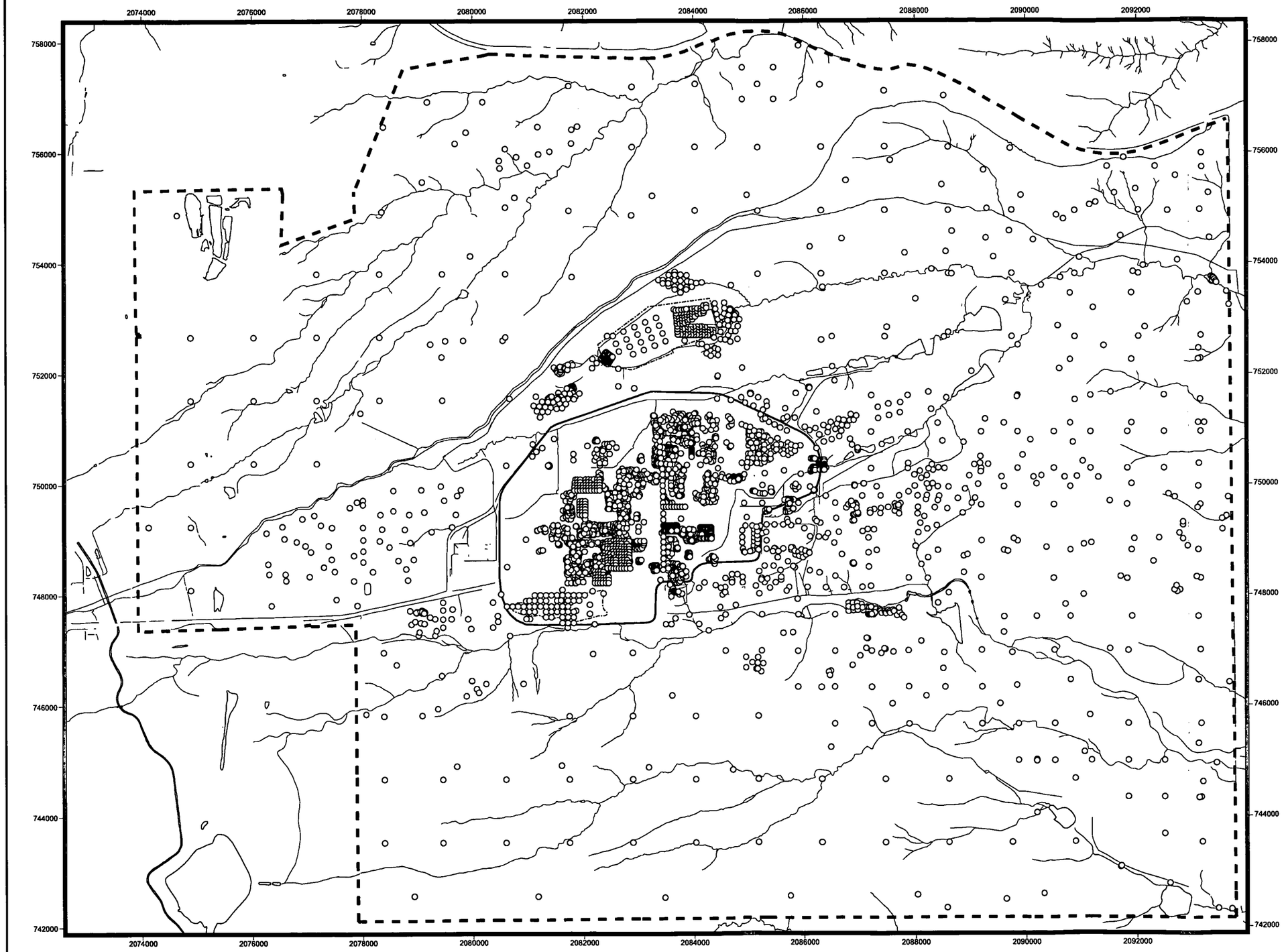

Figure 2

Surface Soil Sample Locations

Legend

- Surface Soil Sample Locations

Total Samples, 7199

Note:
Data presented are the results from surface soil samples, from 6/28/91 through 4/27/05.

Standard Map Features

- Industrial Area OU
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data Set: 04/27/05

N W E S

1000 0 1000 2000 Feet

Scale = 1 : 22,000
State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by:

Date: June 30, 2005

Prepared for:

KAISER•HILL COMPANY

File: W:\Projects\FY2005\RI-FS\Nature_&_Extent\Round3\Figures_1-4.apr

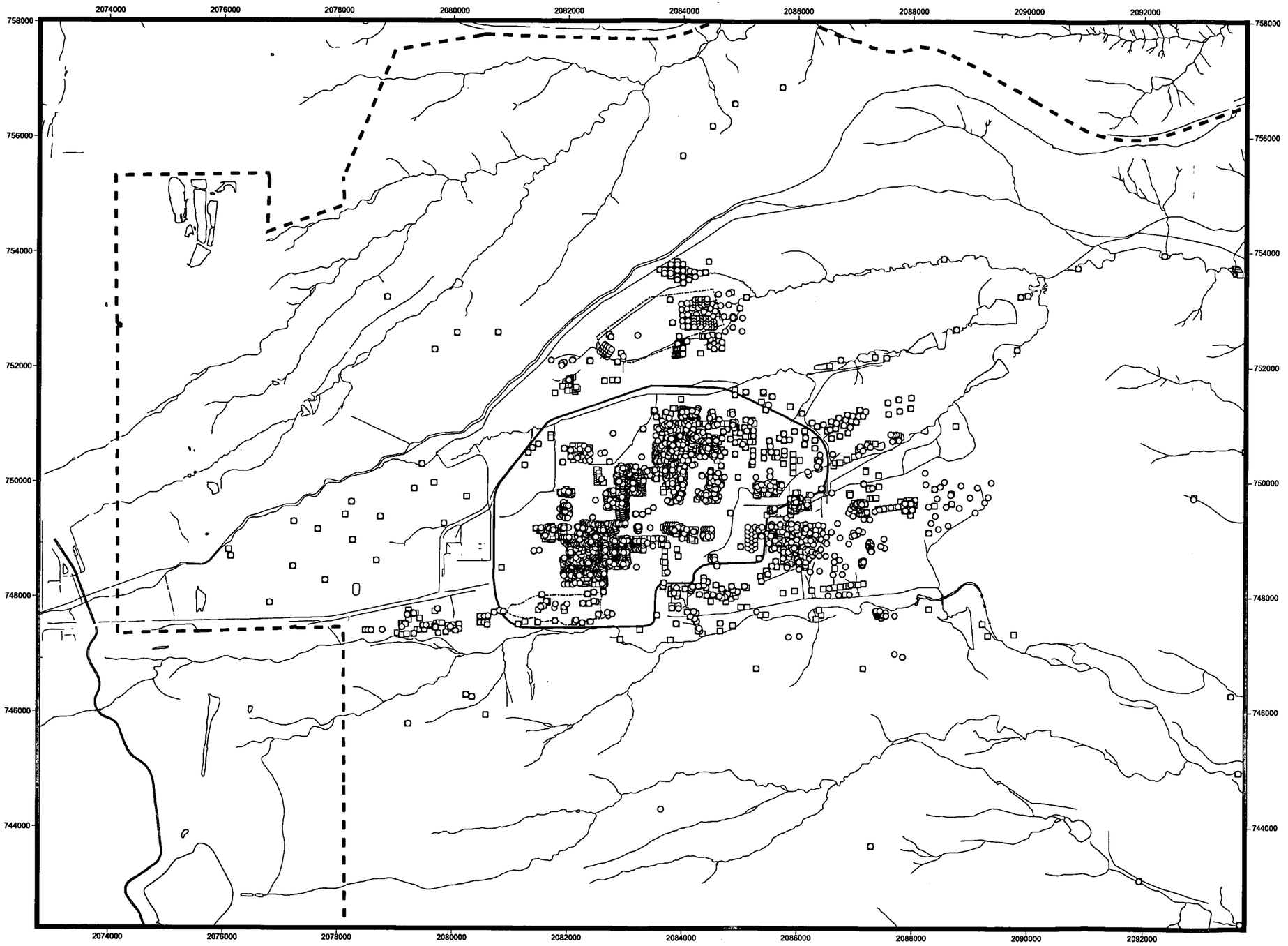

Figure 3

Subsurface Soil Sample Locations (0.5' -3' , 3'-8' , and 8'-12')

Legend

- ○ Sample collected between 0.5' and 3.0'
- □ Sample collected between 3.0' and 8.0'
- △ Sample collected between 8.0' and 12.0'

Total Samples, 9973

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 4/27/05.

Standard Map Features

- Industrial Area OU
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data Set: 04/27/05

N W E S

1000 0 1000 2000 Feet

Scale = 1 : 22,000

State Plane Coordinate Projection
Colorado Central Zone
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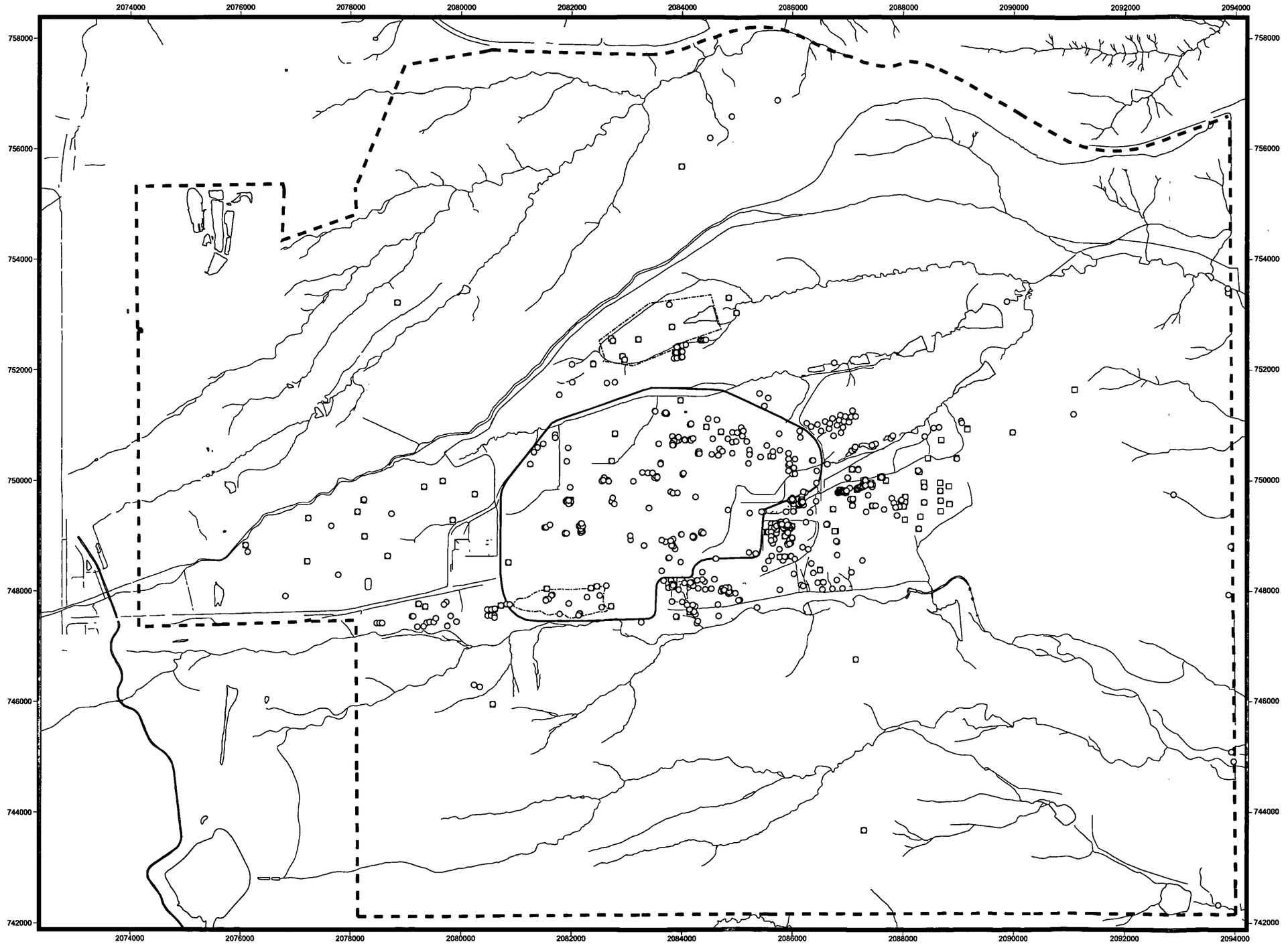

Figure 4

Subsurface Soil Sample Locations (12'-30', 30'-50', and >= 50)

Legend

- ○ Sample collected between 12' and 30'
- □ Sample collected between 30' and 50'
- △ Sample collected at or below 50'

Total Samples, 3799

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 4/27/05.

Standard Map Features

- Industrial Area OU
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data Set: 04/27/05

N W E S

1000 0 1000 2000 Feet

Scale = 1 : 22,000

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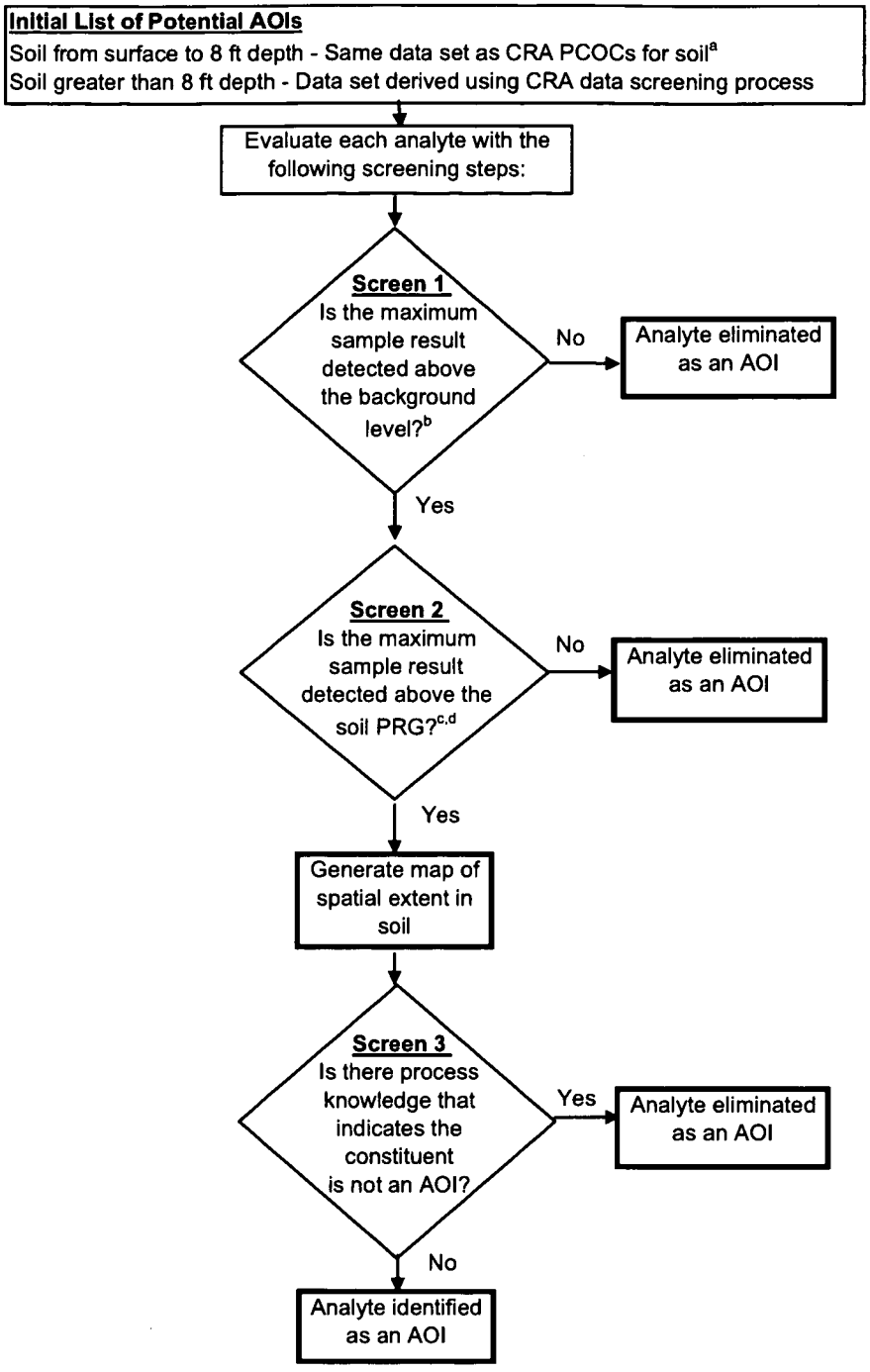
Figure 5 Soil Nature and Extent AOI Selection Process



Notes:

[a] Soil "superset" queried from SWD, for soil samples collected from June 28, 1991, through February 28, 2005.

[b] Background level is defined as the background mean + 2 std. deviations (M+2SD).

- Surface soil (0 - 0.5 feet) and subsurface soil (greater than 0.5 feet), source for background concentrations is DOE 2005.

[c] Soil PRG is defined as 1 x 10^{-6} WRW PRGs based on using a Hazard Index of 0.1 or a Risk of 1x10^{-6} (the more conservative of the two values was used for the PRG).

[d] The PRG value for lead is not a calculated PRG, but rather is taken from the EPA guidance document: Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Correction Action Facilities (1994).

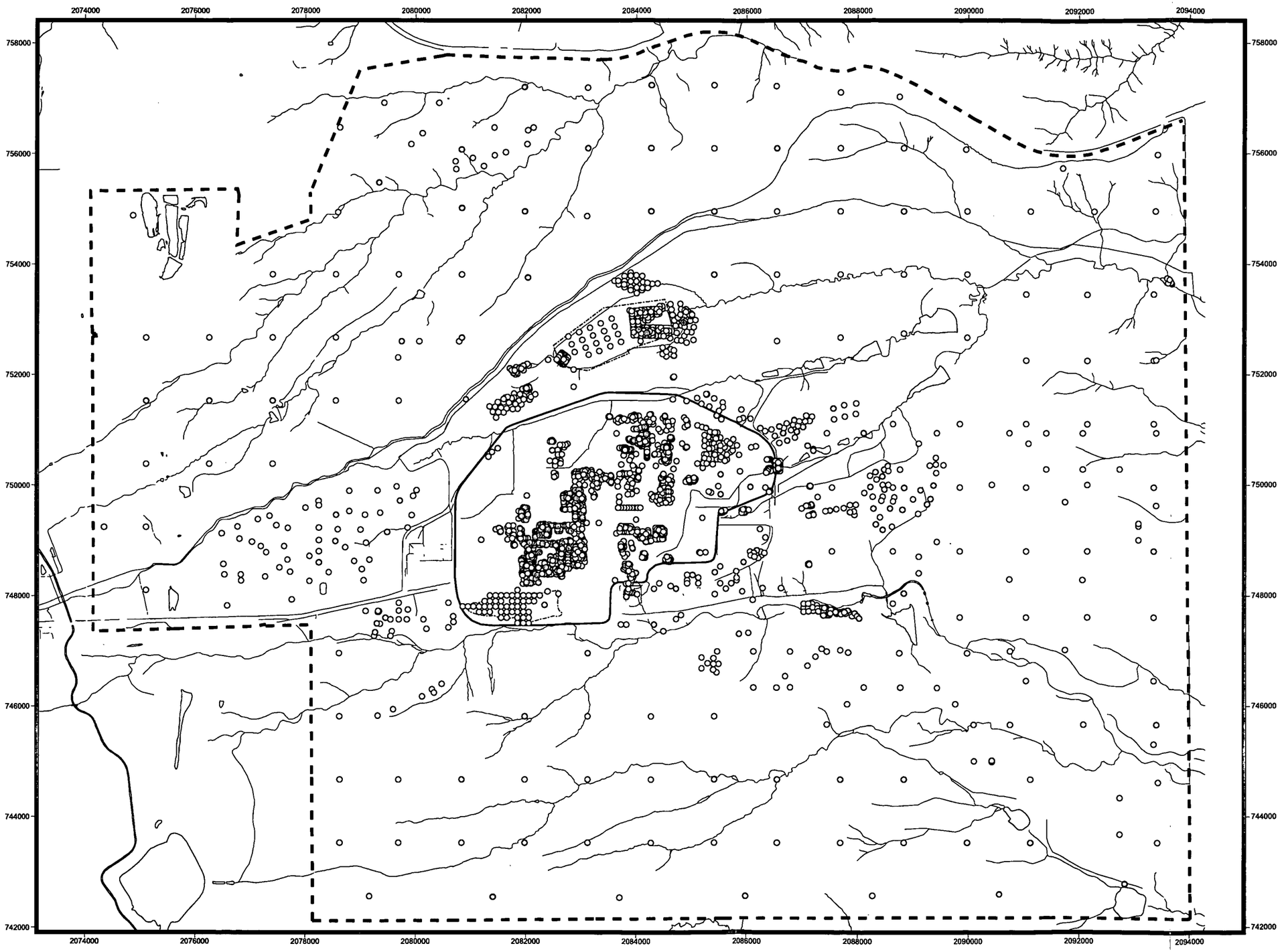


Figure 6

Surface Soil Aluminum

Legend

- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > Background AND < PRG
- ○ Constituent > Detection Limit AND < OR = Background
- ○ Constituent not detected

Note:
Data presented are the results from soil samples collected from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

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Scale = 1 : 22,000

State Plane Coordinate Projection
Colorado Central Zone
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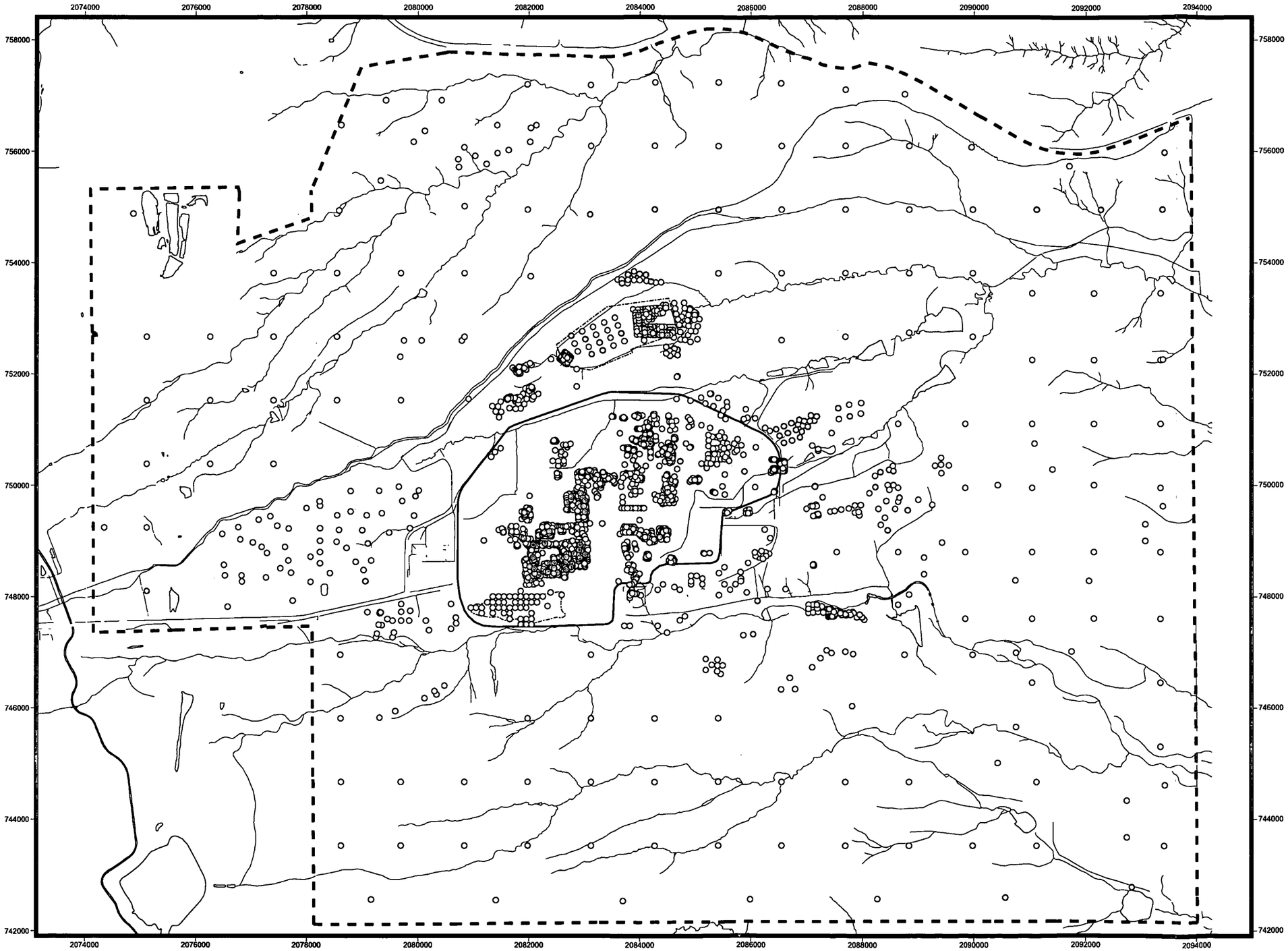

Figure 7

Surface Soil Antimony

Legend

- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > Background AND < PRG
- ○ Constituent > Detection Limit AND < OR = Background
- ○ Constituent not detected

Note:
Data presented are the results from soil samples collected from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

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State Plane Coordinate Projection
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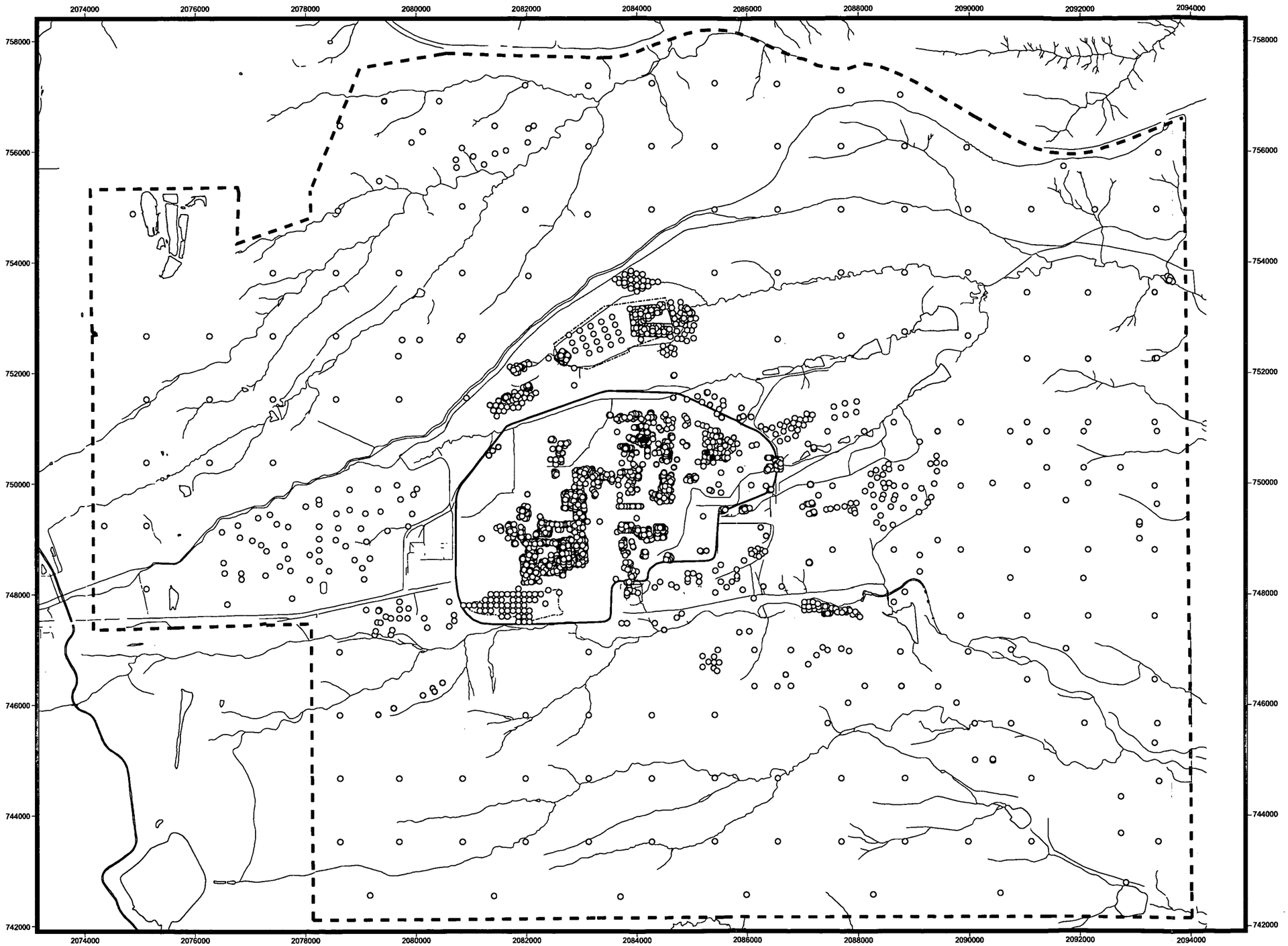

Figure 8

Surface Soil Arsenic

Legend

- ● Constituent > OR = 10 x PRG
- ○ Constituent > Background AND < 10 x PRG
- ○ Constituent > OR = PRG AND < OR = Background
- ○ Constituent > Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples collected from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

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500 0 500 1000 Feet

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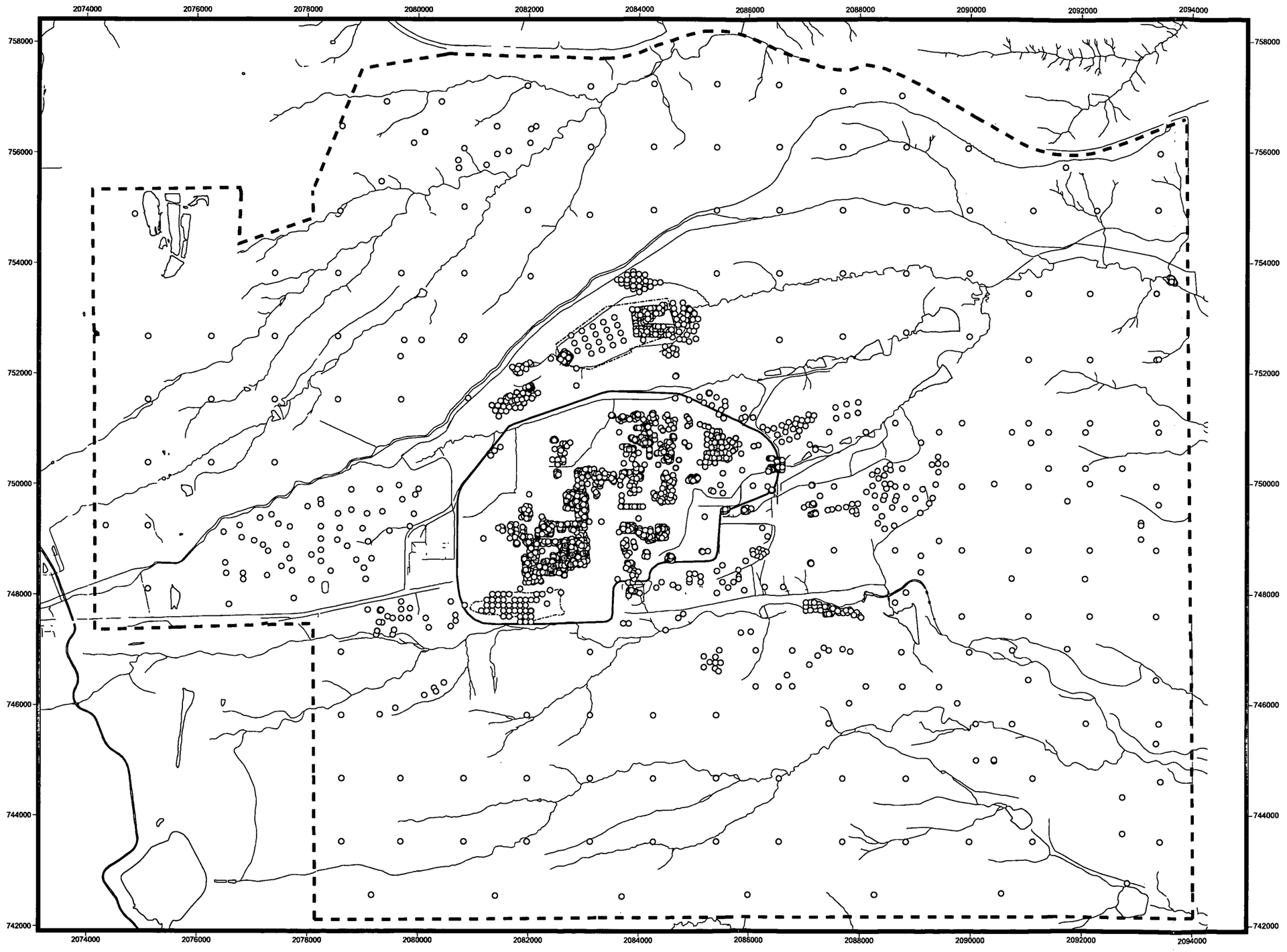

Figure 9

Surface Soil
Cadmium

Legend

- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > Background AND < PRG
- ○ Constituent > Detection Limit AND < OR = Background
- ○ Constituent not detected

Note:
Data presented are the results from soil samples collected from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

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Scale = 1 : 22,000

State Plane Coordinate Projection
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U.S. Department of Energy
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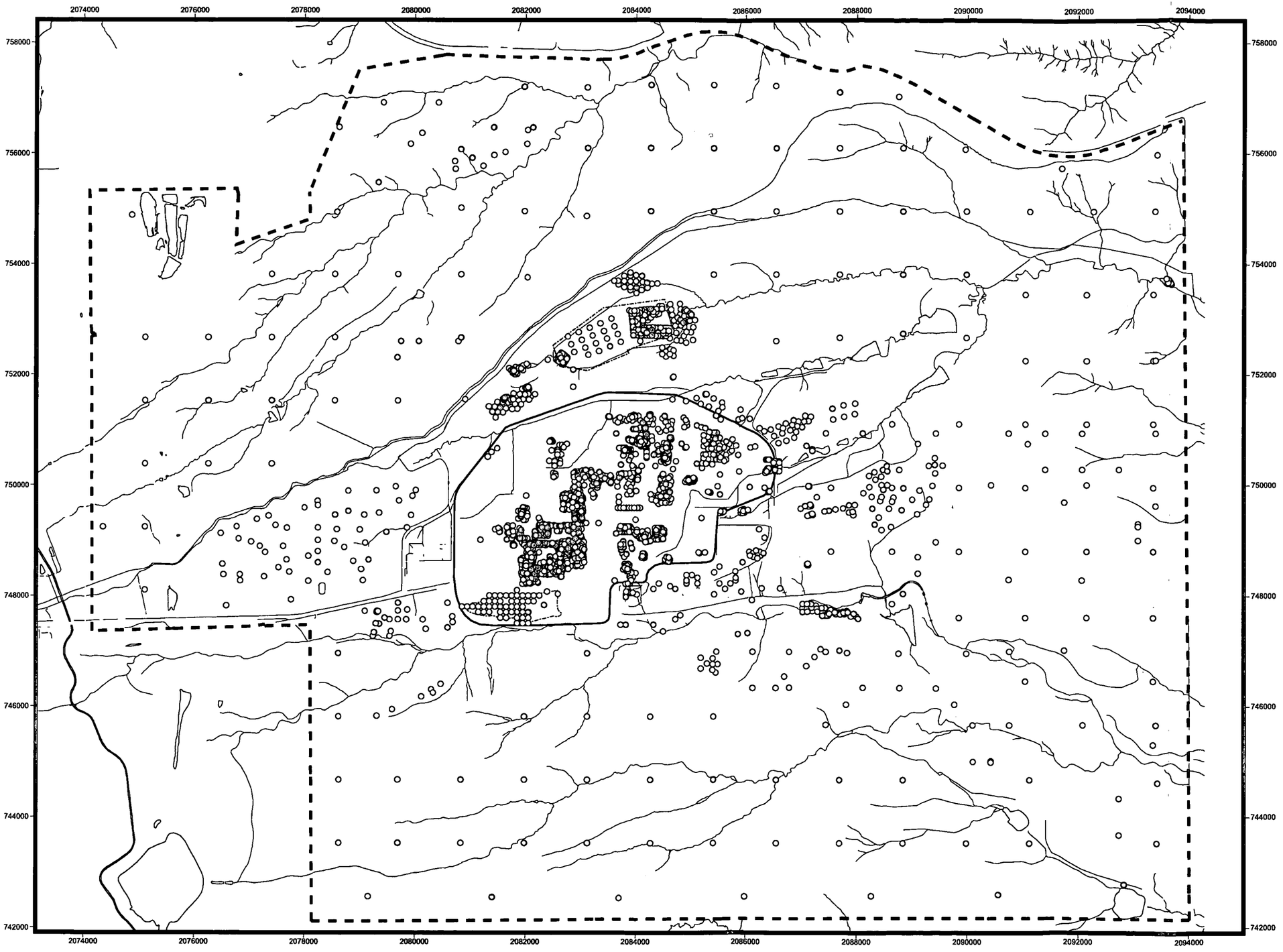

Figure 10

Surface Soil
Chromium, total

Legend

- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > Background AND < PRG
- ○ Constituent > Detection Limit AND < OR = Background
- ○ Constituent not detected

Note:
Data presented are the results from soil samples collected from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

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Scale = 1 : 22,000

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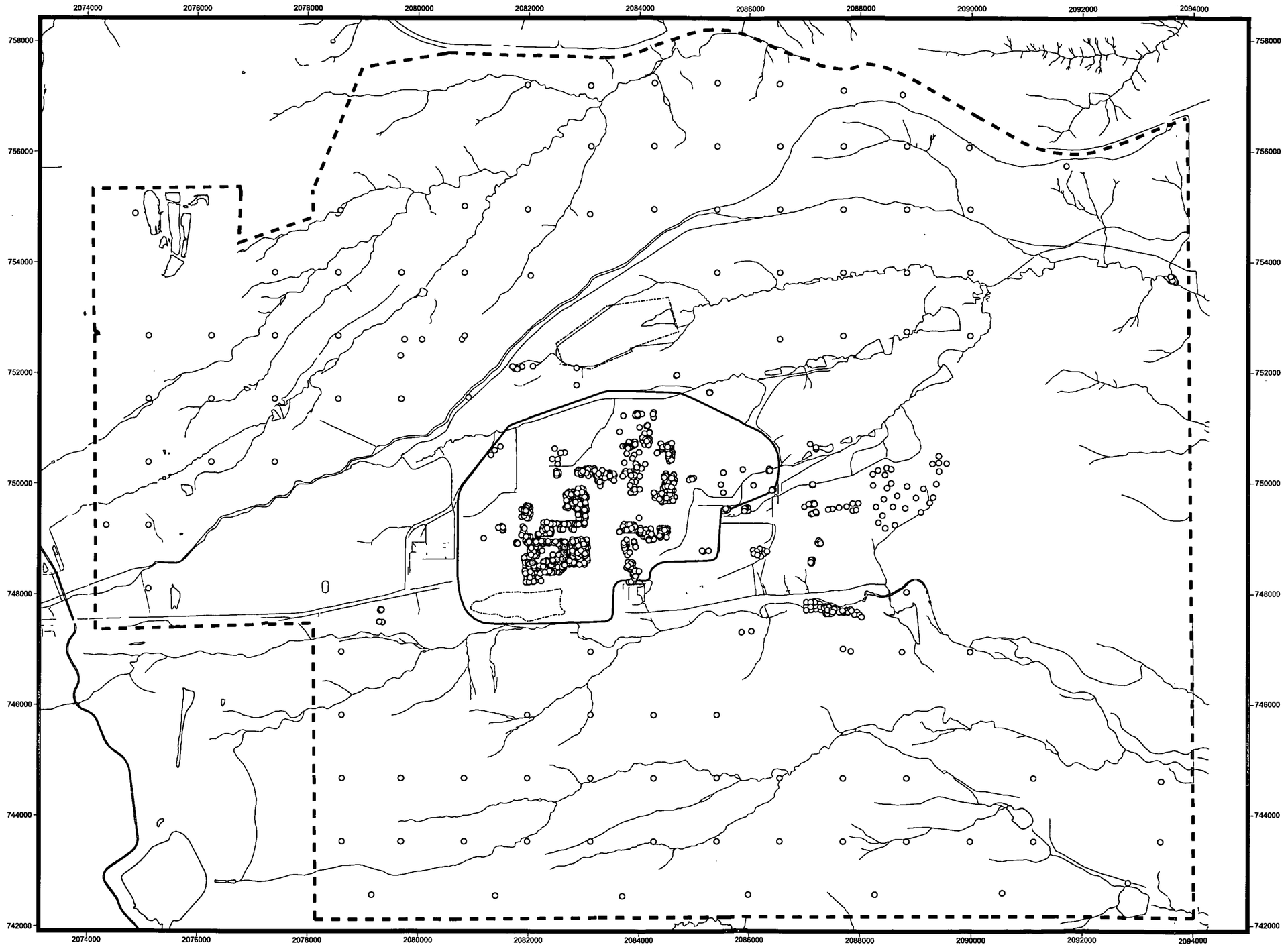

Figure 11

Surface Soil
Uranium, total

Legend

- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > Background AND < PRG
- ○ Constituent > Detection Limit AND < OR = Background
- ○ Constituent not detected

Note:
Data presented are the results from soil samples collected from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT — Data set: 04/27/05

N W E S

500 0 500 1000 Feet

Scale = 1 : 22,000

State Plane Coordinate Projection
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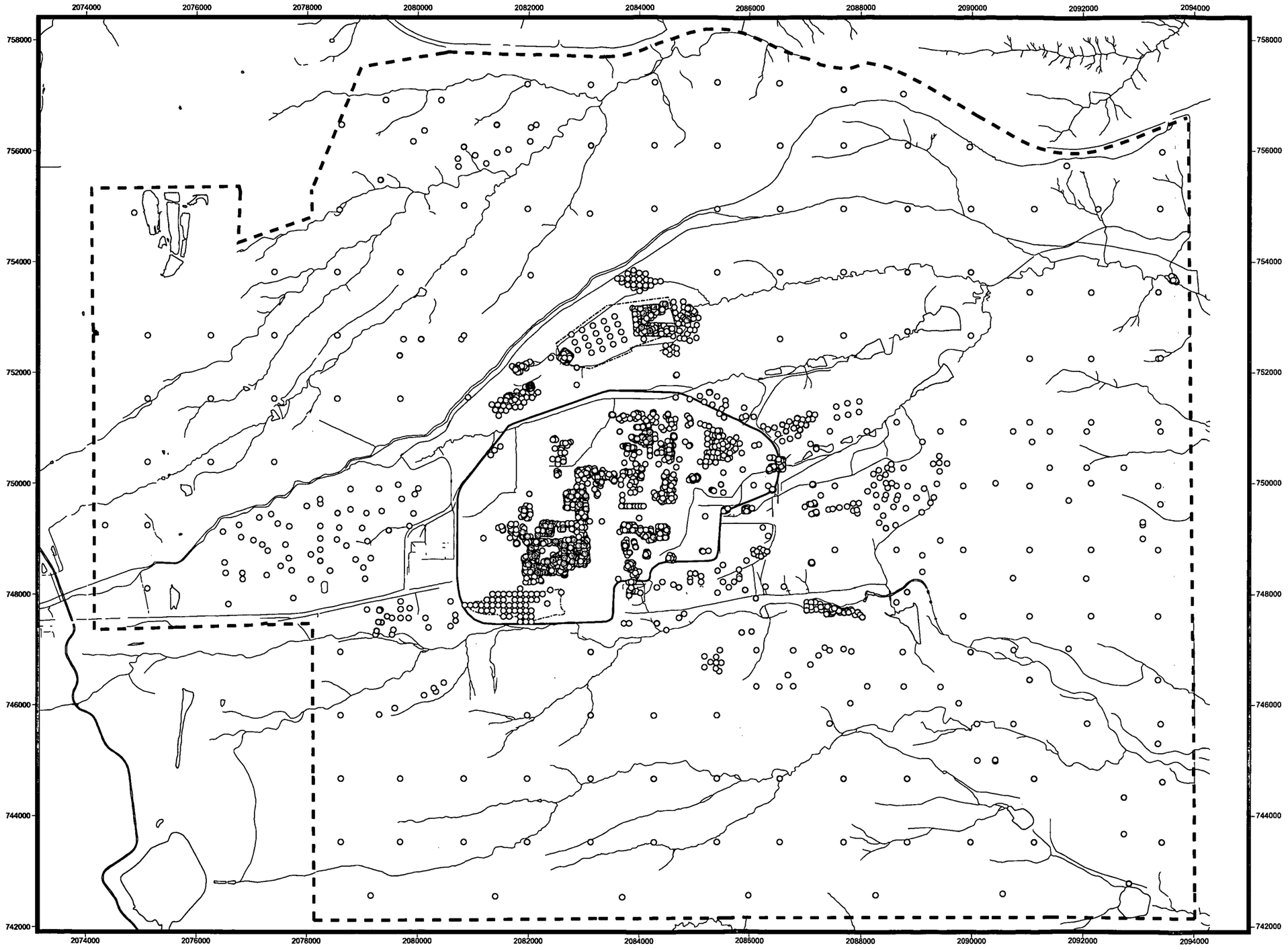

Figure 12

Surface Soil
Vanadium

Legend

- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > Background AND < PRG
- ○ Constituent > Detection Limit AND < OR = Background
- ○ Constituent not detected

Note:
Data presented are the results from soil samples collected from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

N
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500 0 500 1000 Feet

Scale = 1 : 22,000

State Plane Coordinate Projection
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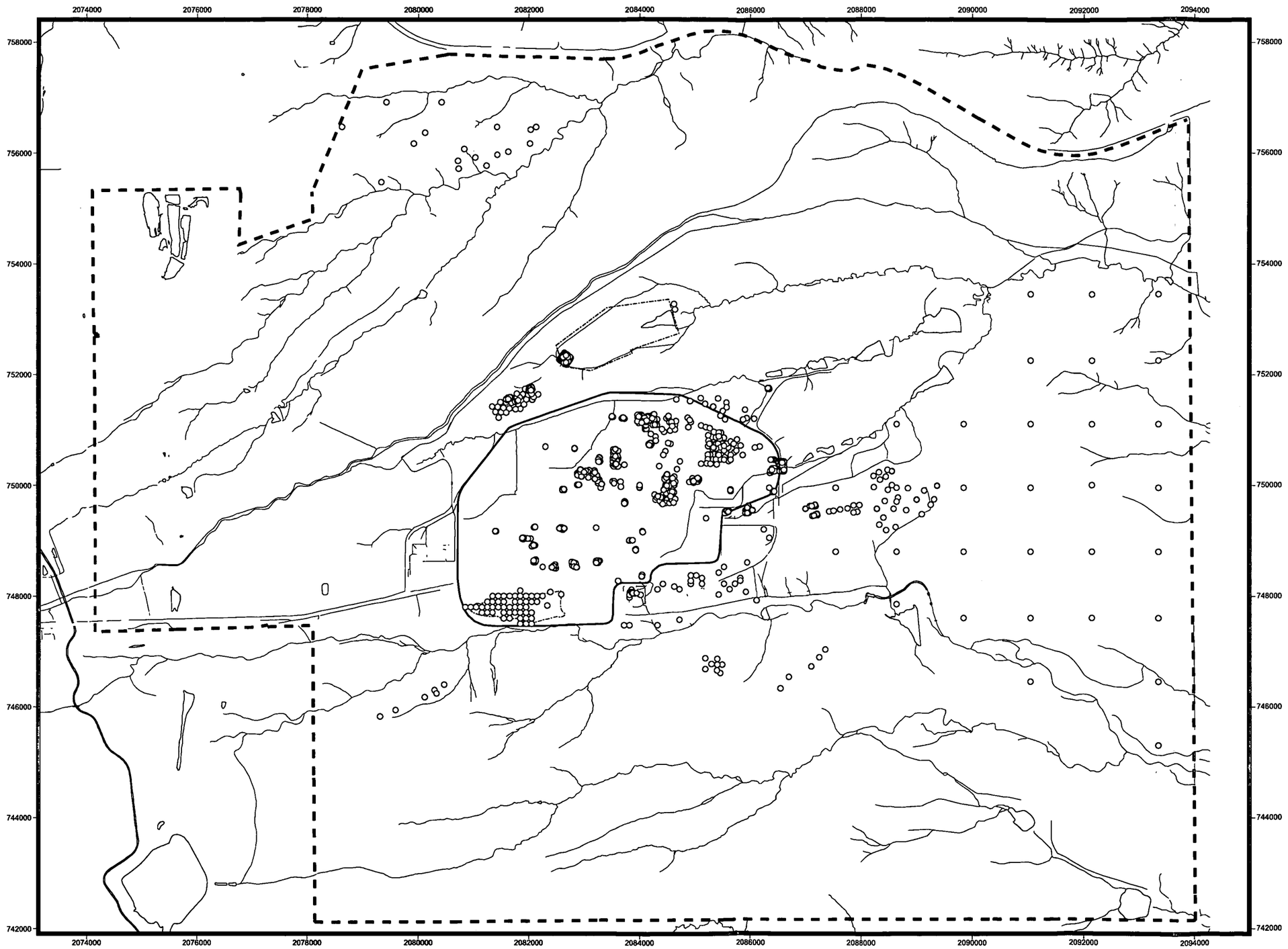

Figure 13

Surface Soil
PCBs (Aroclors 1254 and 1260)

Legend

- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples collected from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

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500 0 500 1000 Feet

Scale = 1 : 22,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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Rocky Flats Environmental Technology Site

Prepared by:

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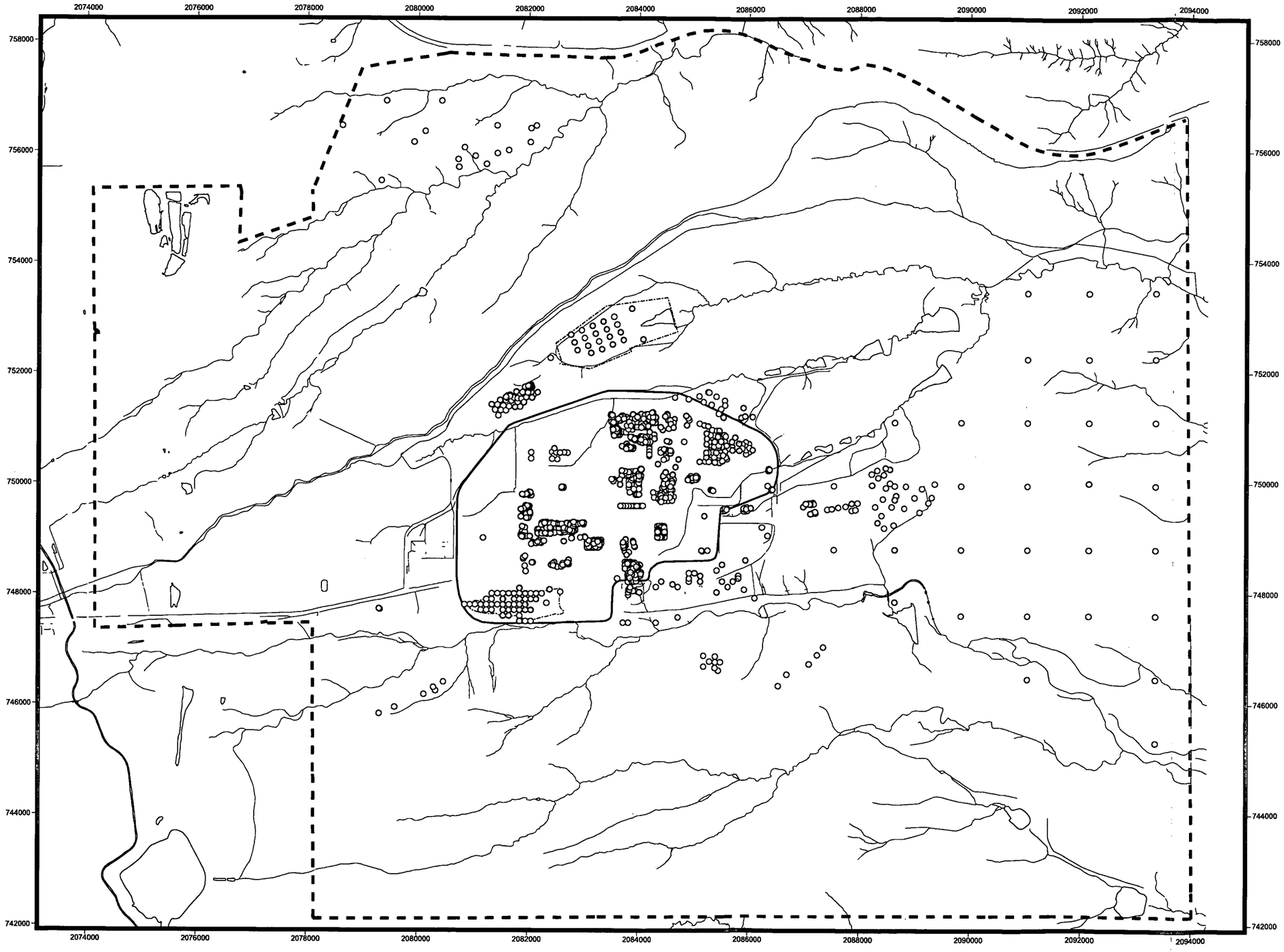

Figure 14

Surface Soil
Benzo(a)anthracene

Legend

- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples collected from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT Data set: 04/27/05

N W E S

500 0 500 1000 Feet

Scale = 1 : 22,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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Prepared by: Date: June 30, 2005

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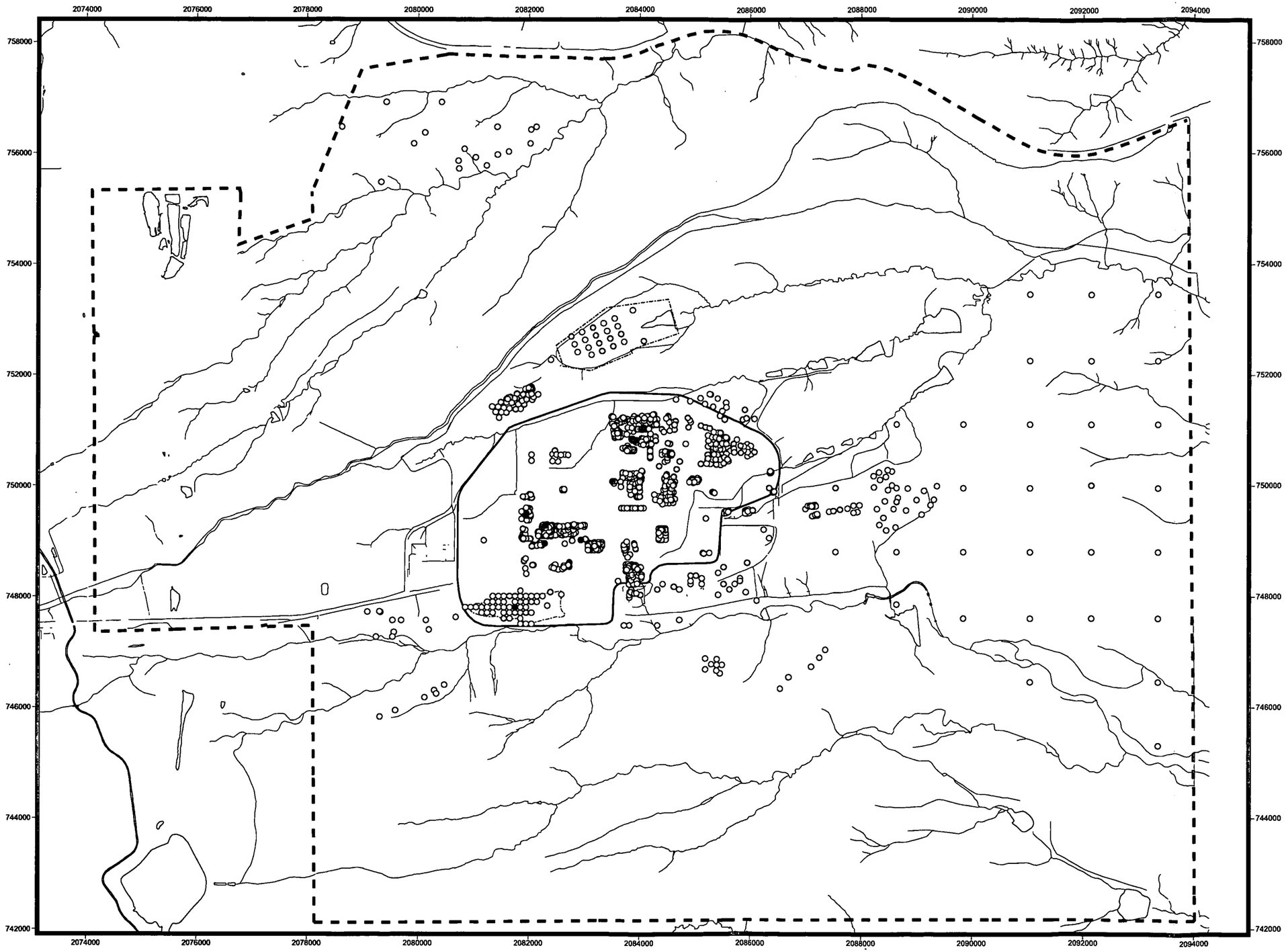

Figure 15

Surface Soil
Benzo(a)pyrene

Legend

- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples collected from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

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Scale = 1 : 22,000

State Plane Coordinate Projection
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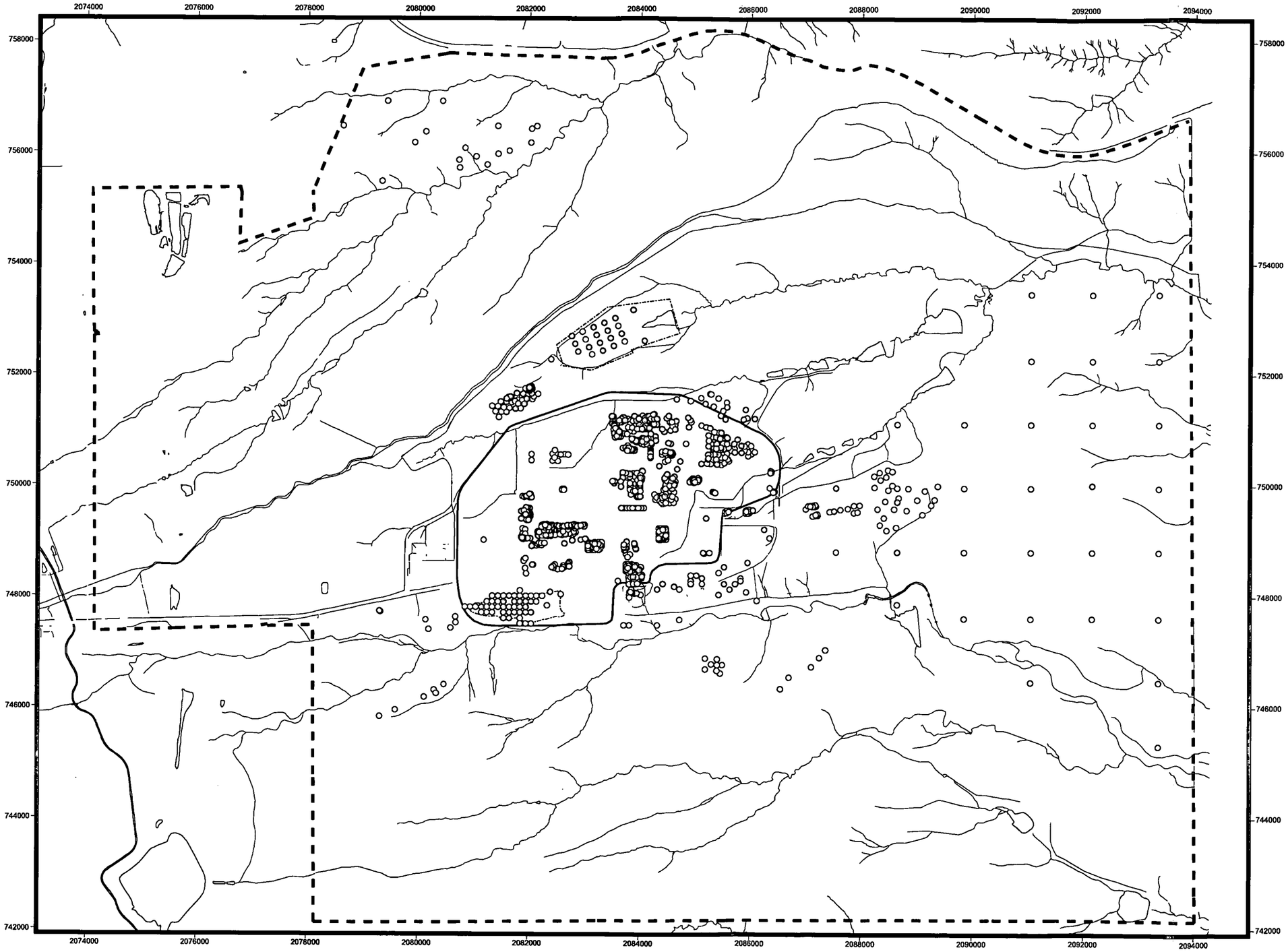

Figure 16

Surface Soil
Benzo(b)fluoranthene

Legend

- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples collected from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

N W E S

500 0 500 1000 Feet

Scale = 1 : 22,000

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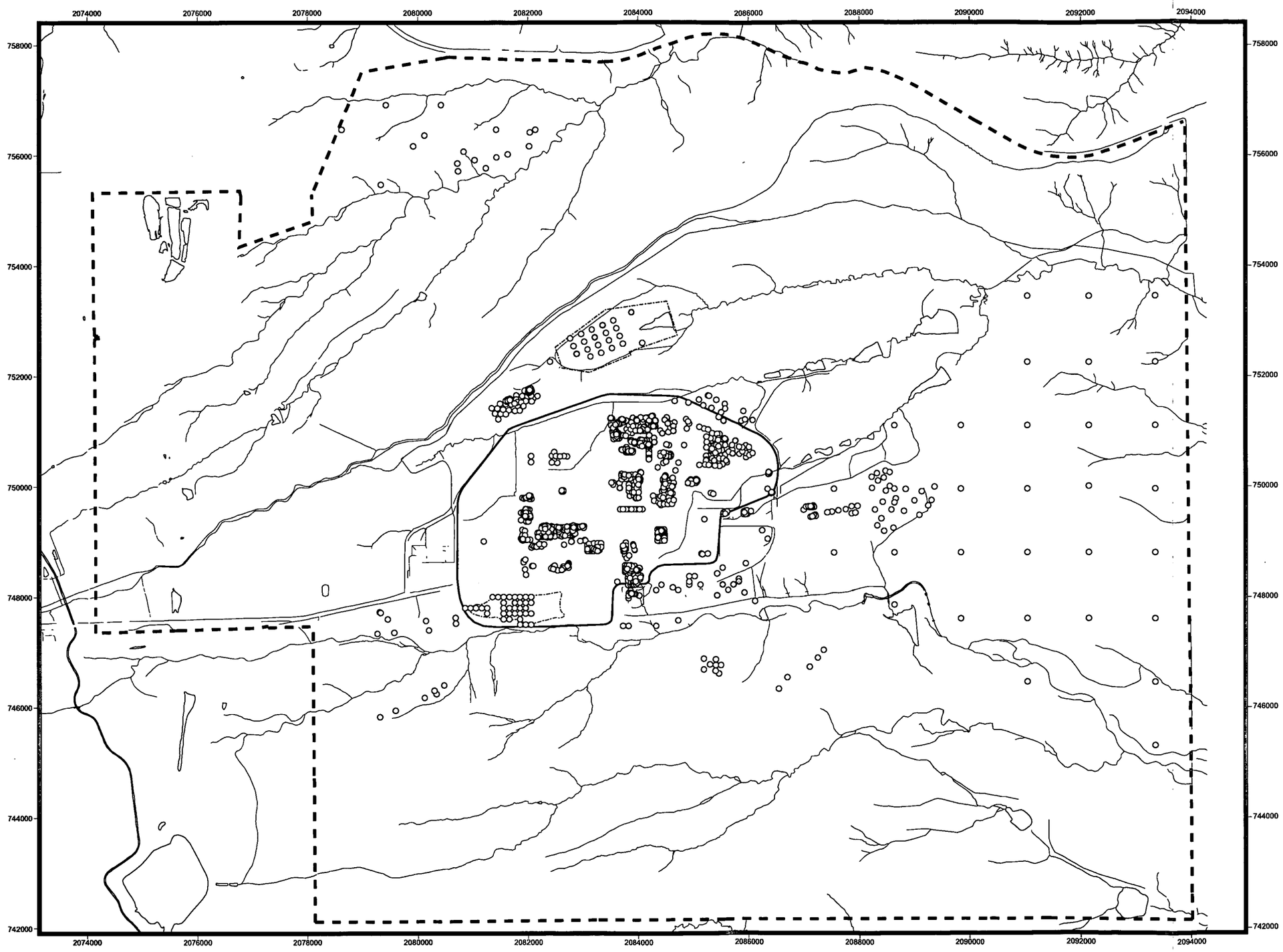

Figure 17

Surface Soil
Dibenz(a,h)anthracene

Legend

- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples collected from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

N W E S

500 0 500 1000 Feet

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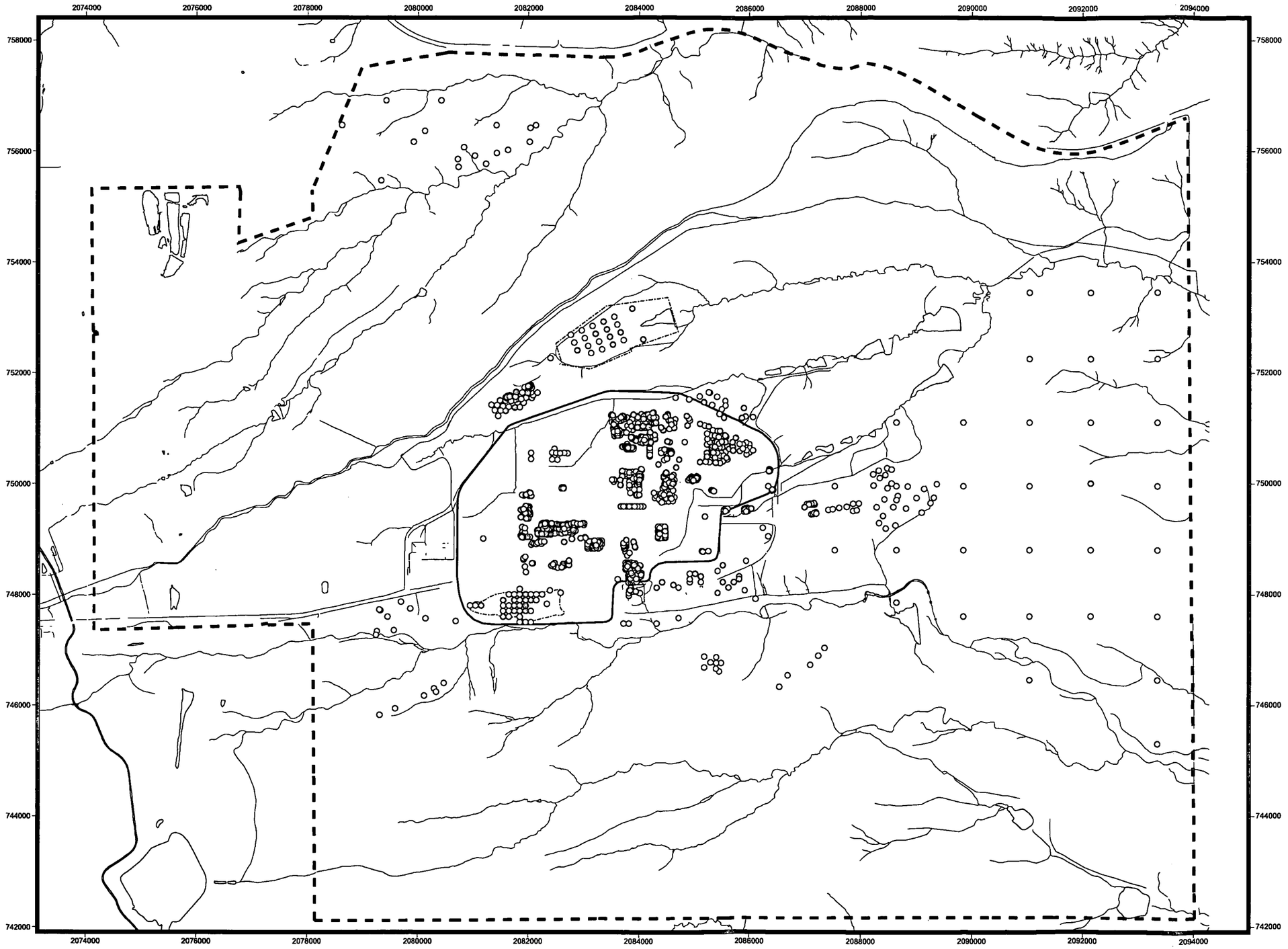

Figure 18

Surface Soil
Indeno(1,2,3-cd)pyrene

Legend

- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples collected from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
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DRAFT

Data set: 04/27/05

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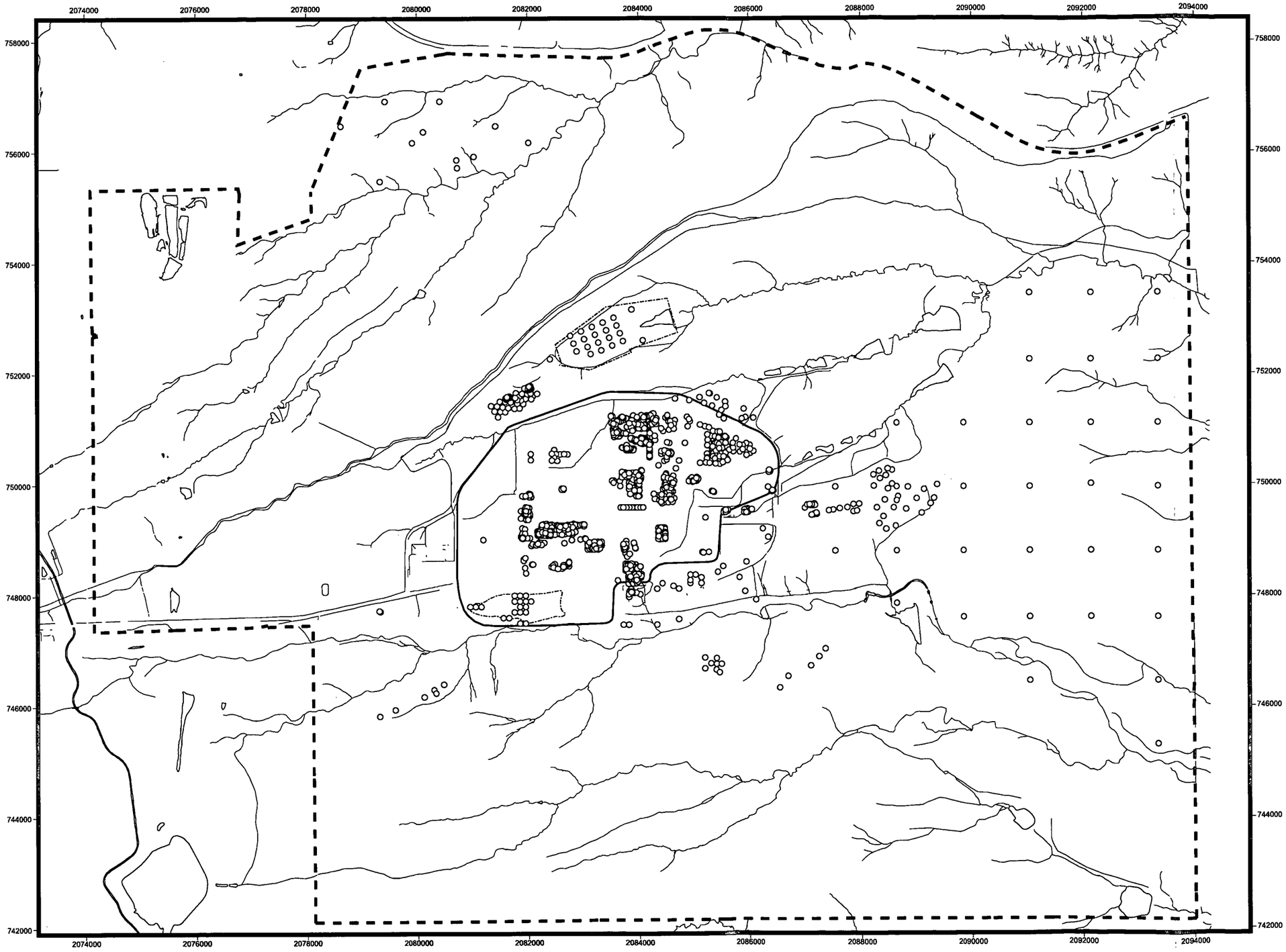

Figure 19

Surface Soil
Pentachlorophenol

Legend

- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples collected from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

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State Plane Coordinate Projection
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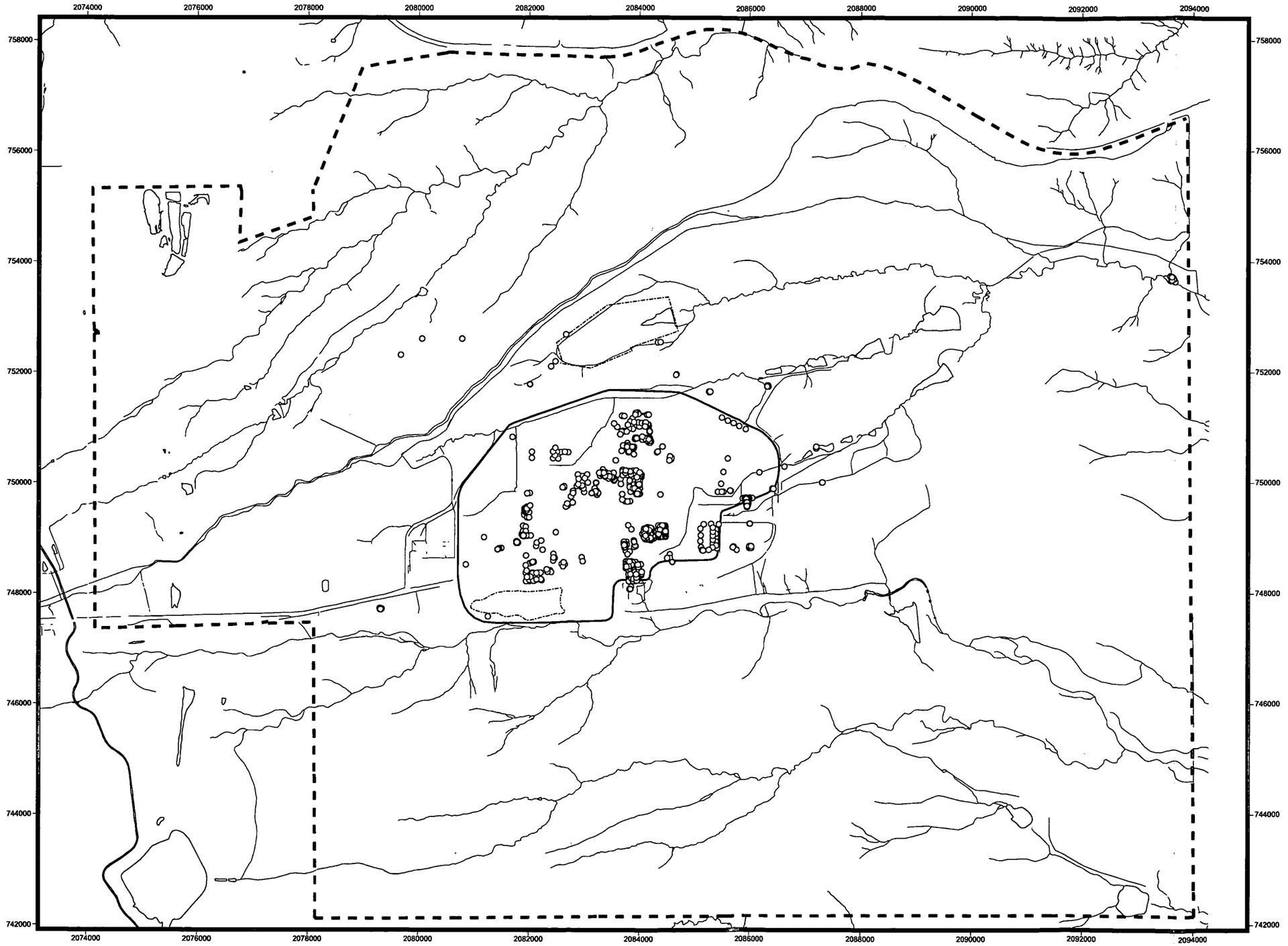

Figure 20

Surface Soil
Tetrachloroethene

Legend

- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples collected from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
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- Present Landfill
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DRAFT

Data set: 04/27/05

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500 0 500 1000 Feet

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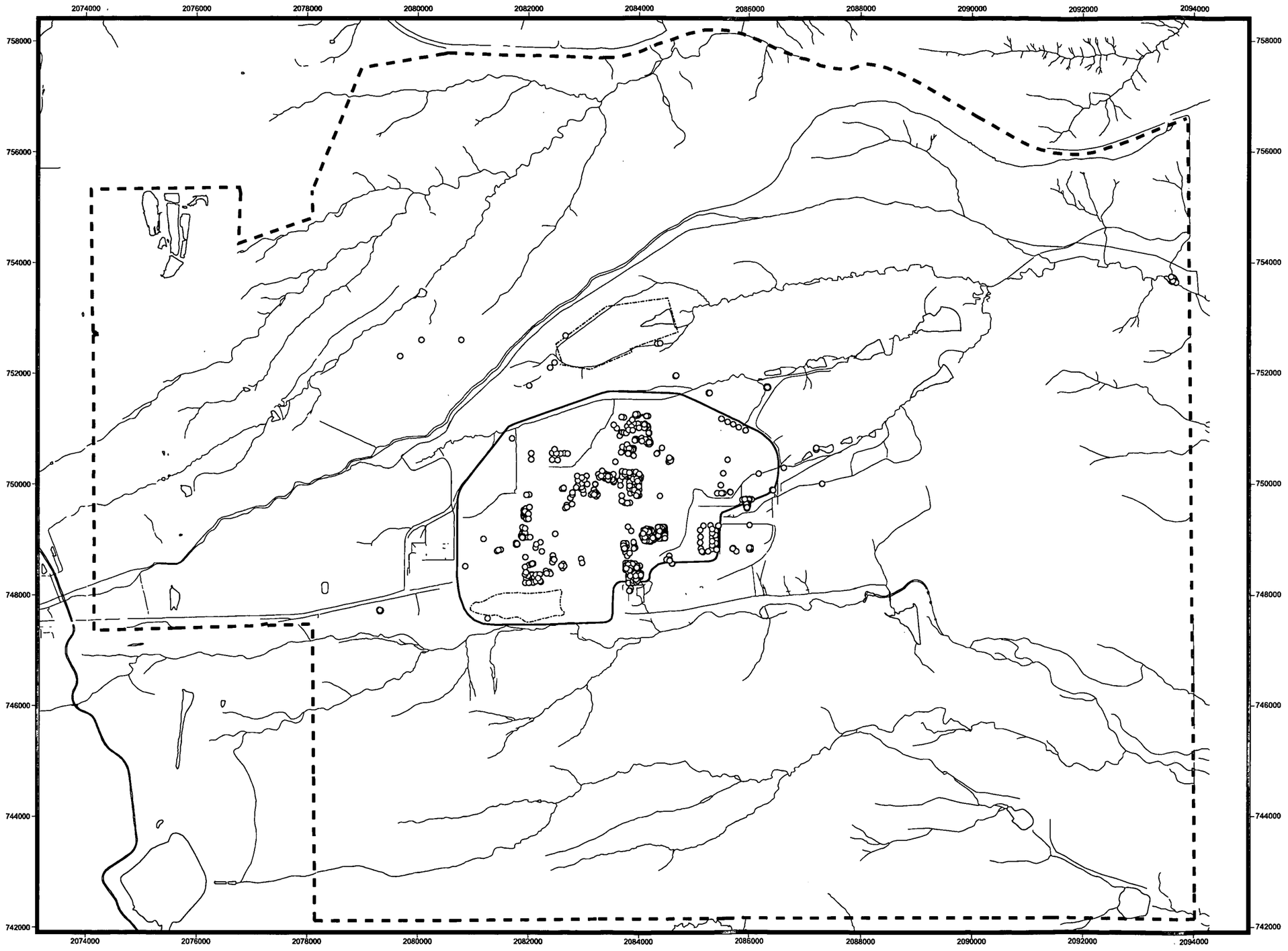

Figure 21

Surface Soil
Trichloroethene

Legend

- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples collected from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

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Scale = 1 : 22,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by:

Date: June 30, 2005

Prepared for:

KAISER•HILL COMPANY

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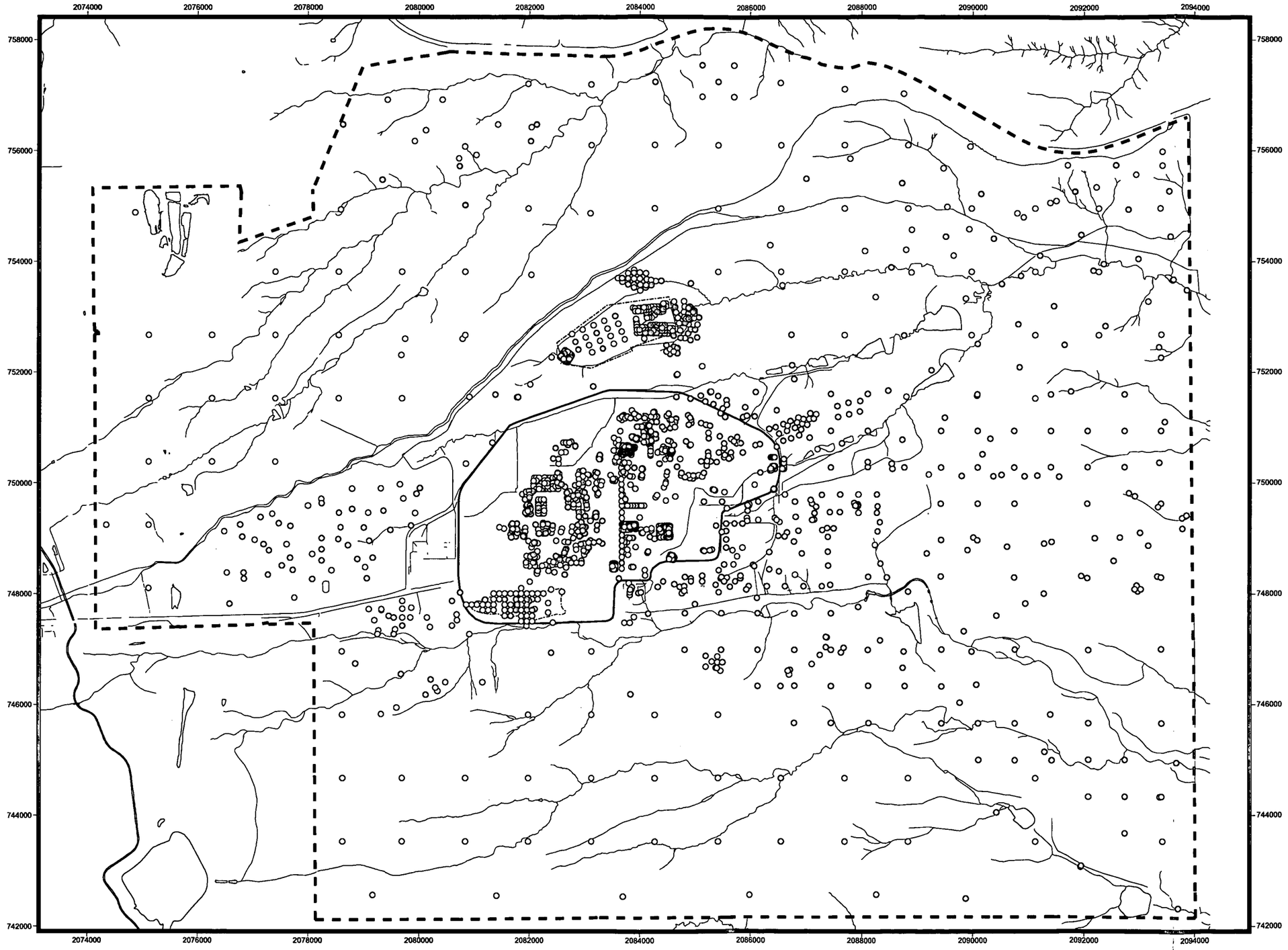

Figure 22

Surface Soil
Americium-241

Legend

- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > Background AND < PRG
- ○ Constituent > Detection Limit AND < OR = Background
- ○ Constituent not detected

Note:
Data presented are the results from soil samples collected from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

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Scale = 1 : 22,000

State Plane Coordinate Projection
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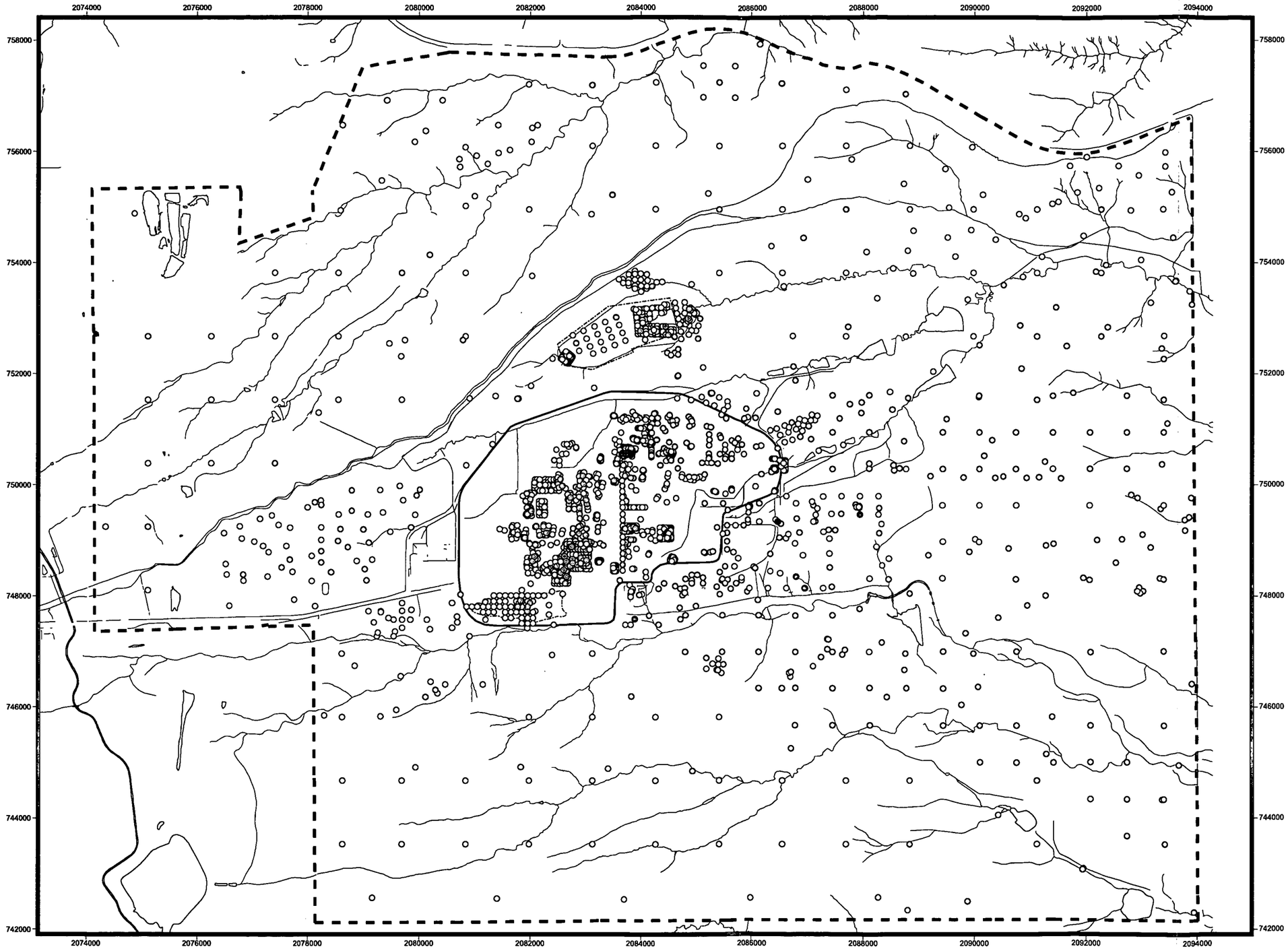

Figure 23

Surface Soil
Plutonium-239/240

Legend

- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > Background AND < PRG
- ○ Constituent > Detection Limit AND < OR = Background
- ○ Constituent not detected

Note:
Data presented are the results from soil samples collected from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

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Scale = 1 : 22,000

State Plane Coordinate Projection
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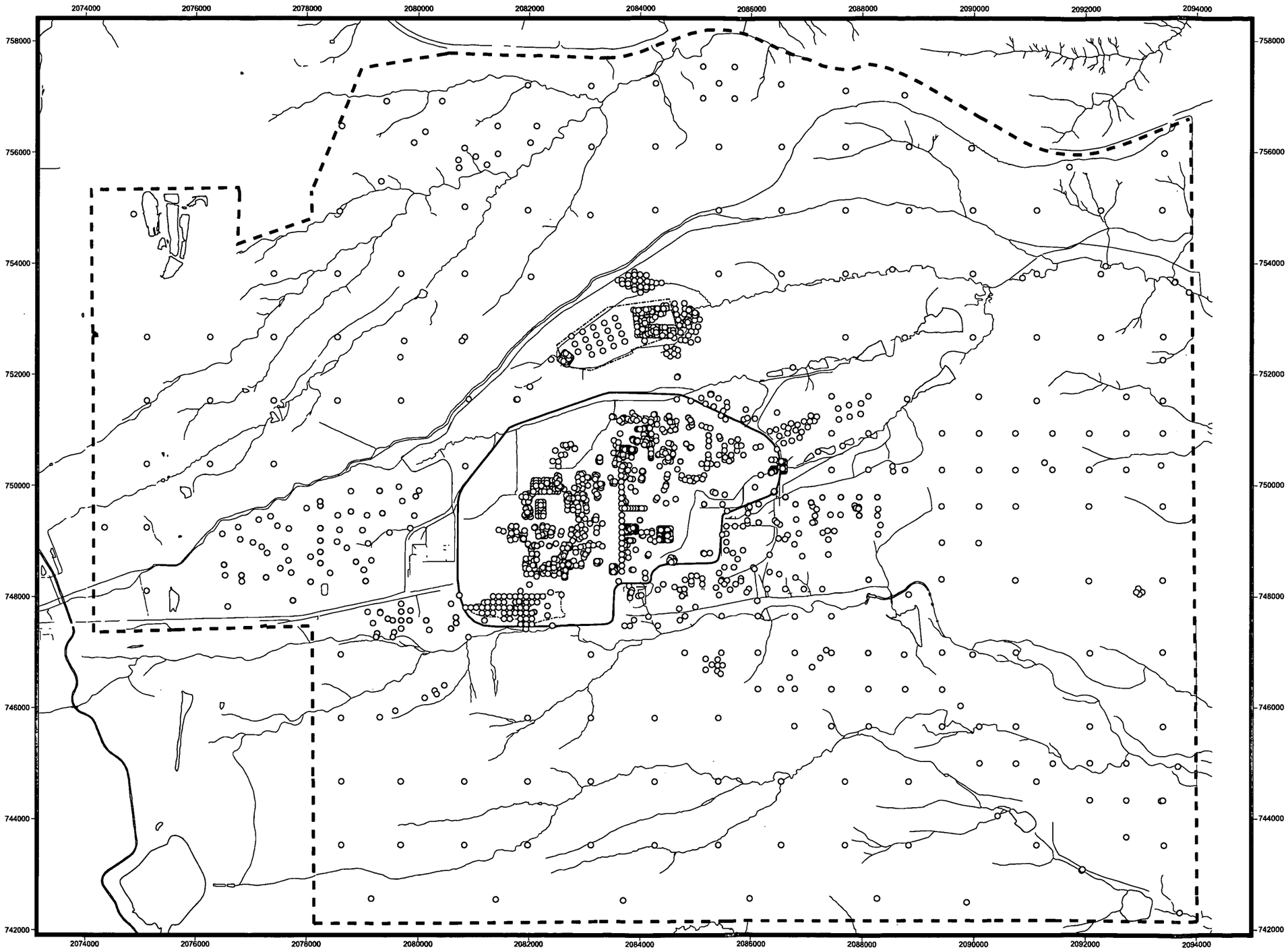

Figure 24

Surface Soil
Uranium
(U-233/234, U-235, and U-238)

Legend

- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > Background AND < PRG
- ○ Constituent > Detection Limit AND < OR = Background
- ○ Constituent not detected

Note:
Data presented are the results from soil samples collected from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT — Data set: 04/27/05

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Scale = 1 : 22,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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Rocky Flats Environmental Technology Site

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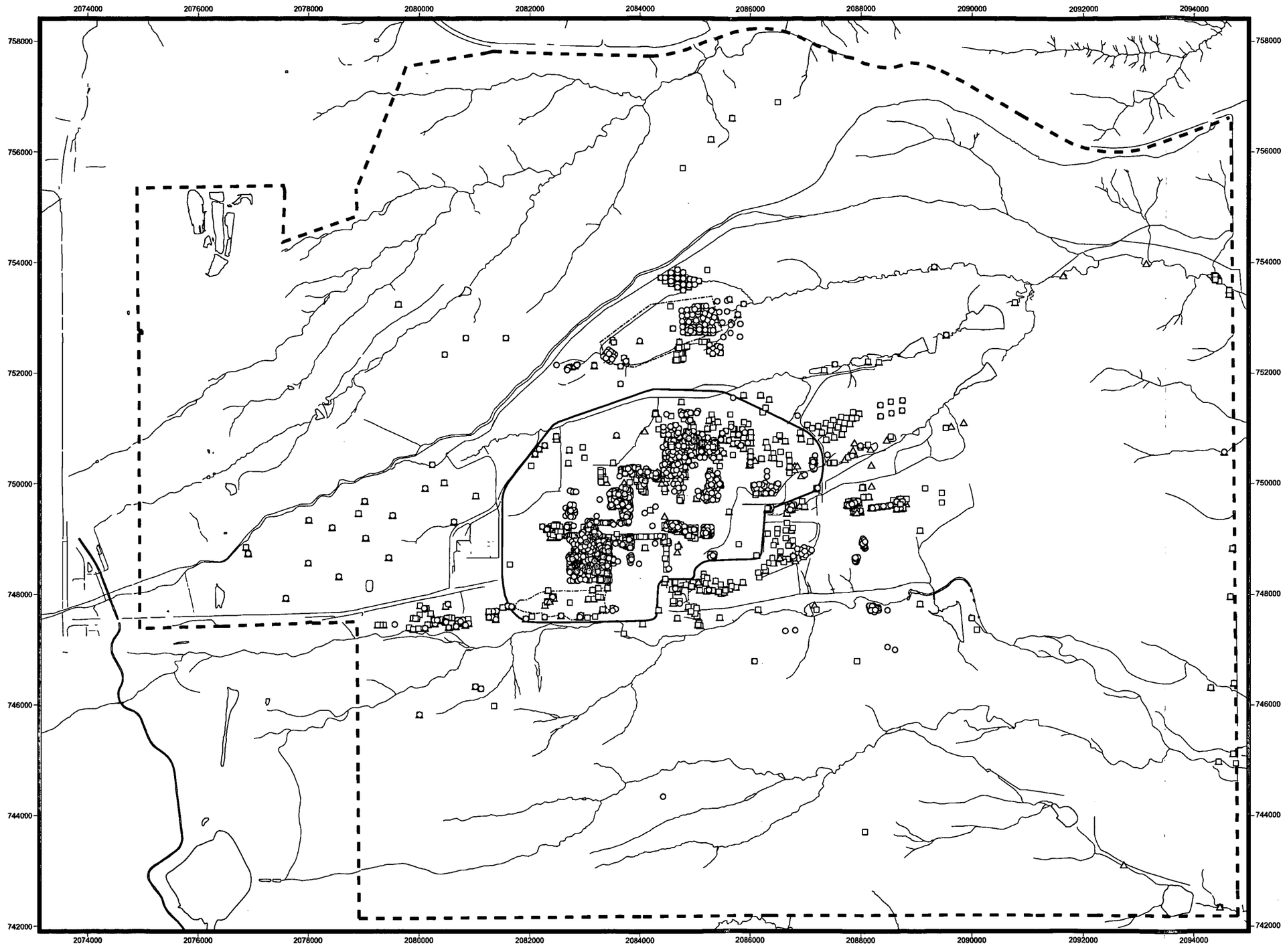

Figure 25

Subsurface Soil
Arsenic
(0.5'-3', 3'-8', and 8'-12')

Legend

- ○ Sample collected > 0.5' AND < OR = 3'
- □ Sample collected > 3' AND < OR = 8'
- △ Sample collected > 8' AND < OR = 12'
- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > Background AND < PRG
- ○ Constituent > Detection Limit AND < OR = Background
- ○ Constituent not detected

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT Data set: 04/27/05

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Scale = 1 : 22,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
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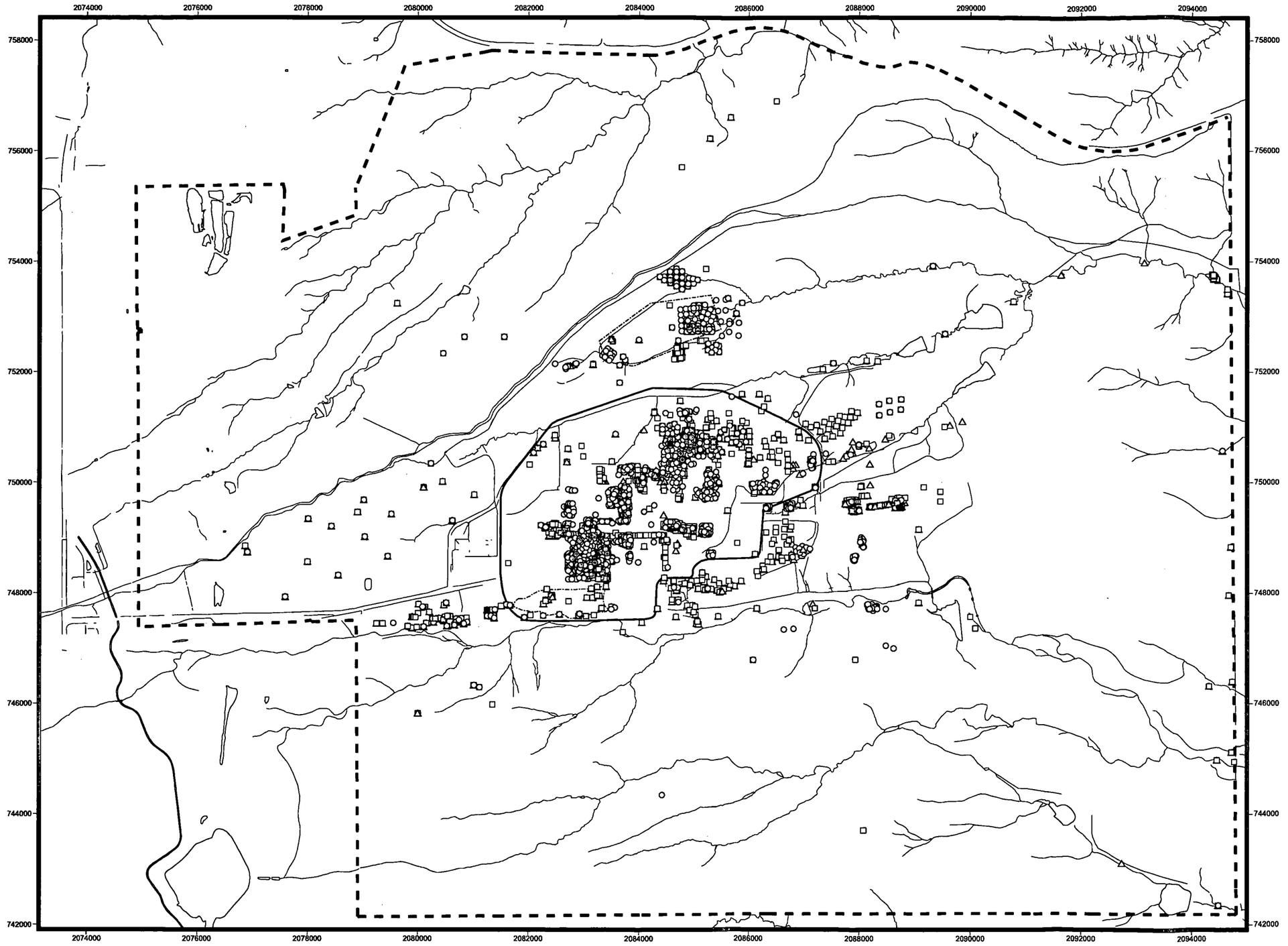

Figure 26

Subsurface Soil
Chromium, total
(0.5'-3', 3'-8', and 8'-12')

Legend

- ○ Sample collected > 0.5' AND < OR = 3'
- □ Sample collected > 3' AND < OR = 8'
- △ Sample collected > 8' AND < OR = 12'
- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > Background AND < PRG
- ○ Constituent > Detection Limit AND < OR = Background
- ○ Constituent not detected

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

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Scale = 1 : 22,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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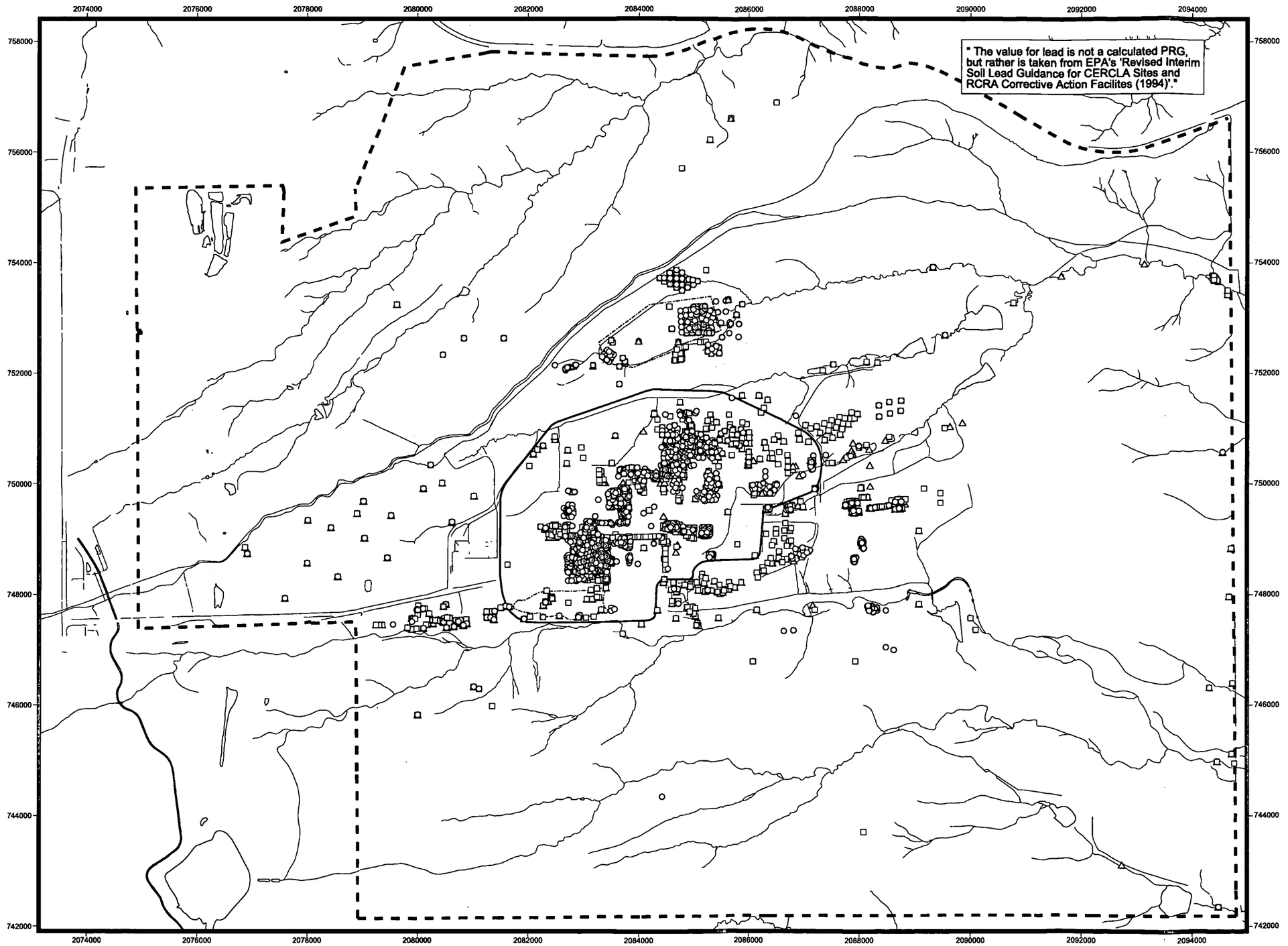

Figure 27

Subsurface Soil
Lead
(0.5'-3', 3'-8', and 8'-12')

Legend

- ○ Sample collected > 0.5' AND < OR = 3'
- □ Sample collected > 3' AND < OR = 8'
- △ Sample collected > 8' AND < OR = 12'
- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > Background AND < PRG
- ○ Constituent > Detection Limit AND < OR = Background
- ○ Constituent not detected

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

N
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500 0 500 1000 Feet

Scale = 1 : 22,000

State Plane Coordinate Projection
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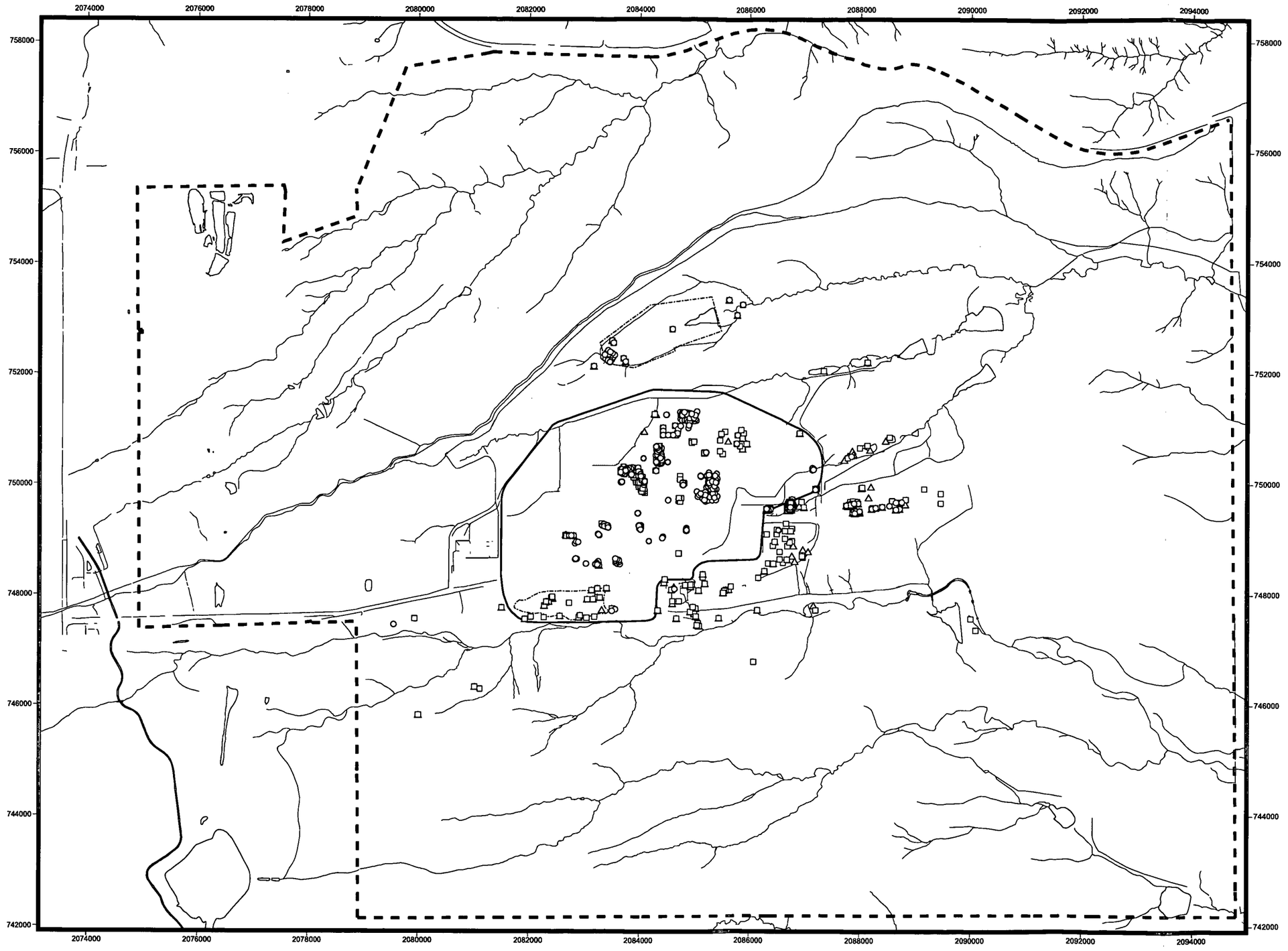

Figure 28

Subsurface Soil
PCBs (Aroclor 1016, 1254 and 1260)
(0.5'-3', 3'-8', and 8'-12')

Legend

- ○ Sample collected > 0.5' AND < OR = 3'
- □ Sample collected > 3' AND < OR = 8'
- △ Sample collected > 8' AND < OR = 12'
- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

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500 0 500 1000 Feet

Scale = 1 : 22,000

State Plane Coordinate Projection
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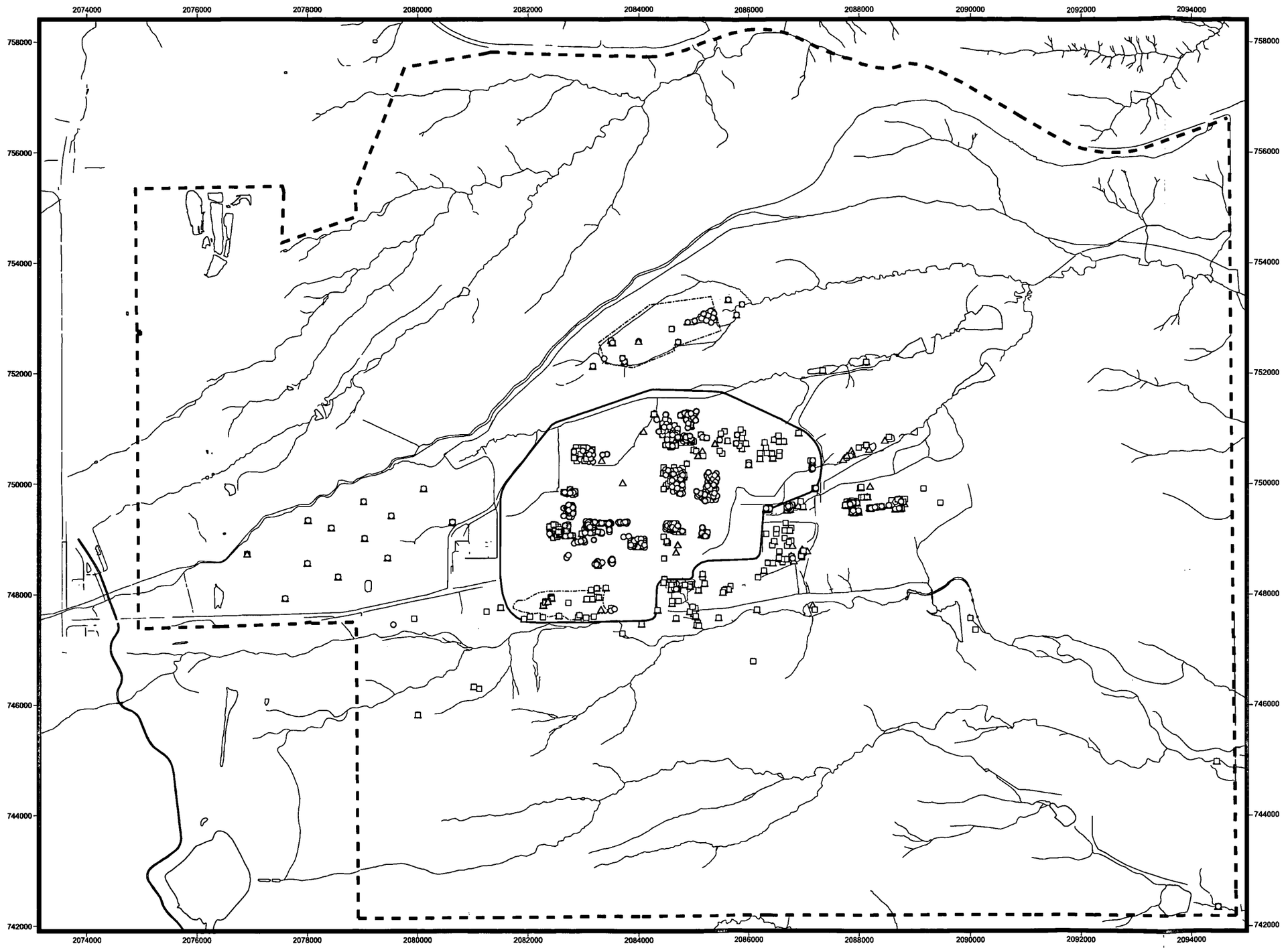

Figure 29

Subsurface Soil
Benzo(a)anthracene
(0.5'-3', 3'-8', and 8'-12')

Legend

- ○ Sample collected > 0.5' AND < OR = 3'
- □ Sample collected > 3' AND < OR = 8'
- △ Sample collected > 8' AND < OR = 12'
- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

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Scale = 1 : 22,000

State Plane Coordinate Projection
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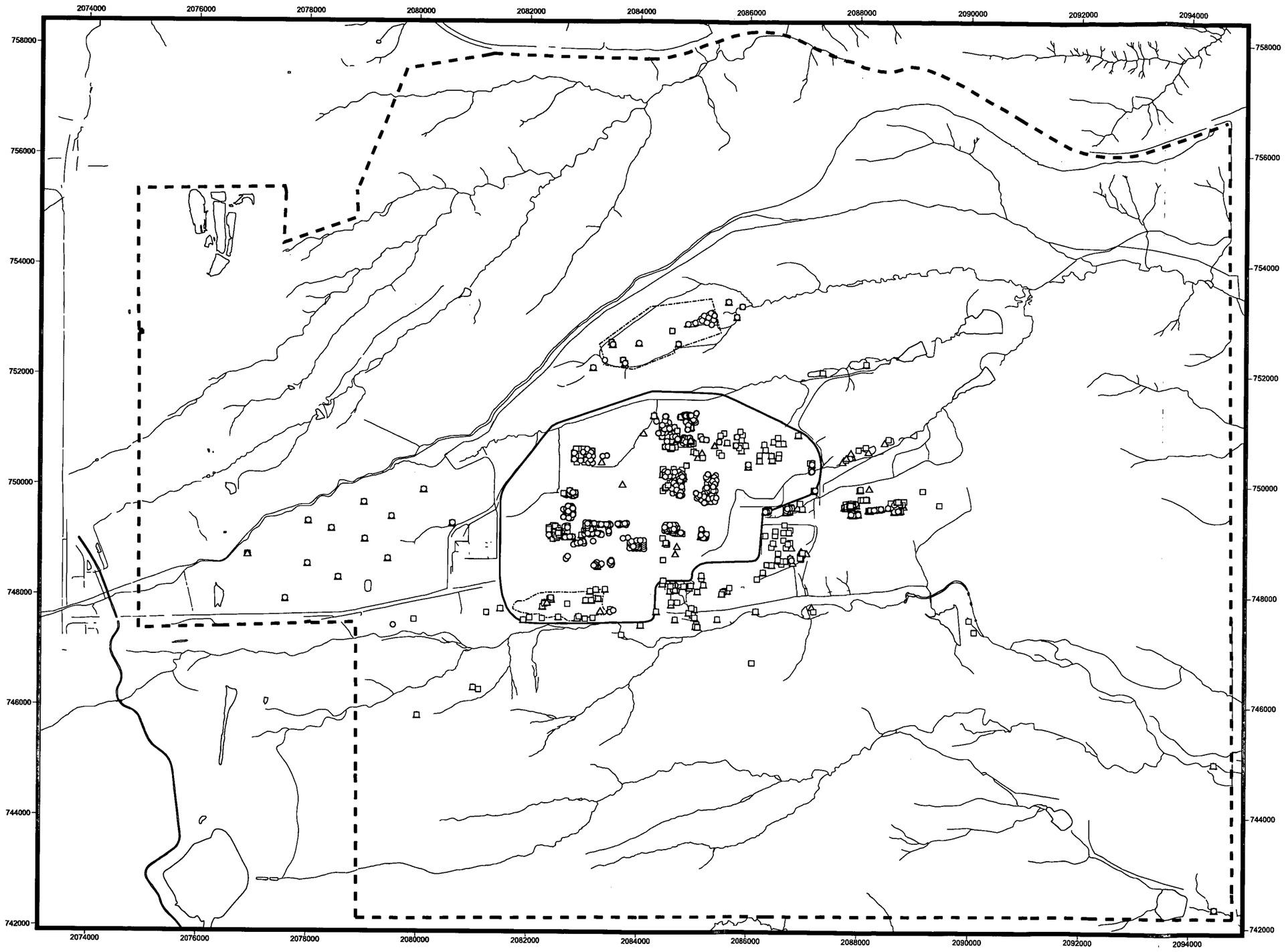

Figure 30

Subsurface Soil
Benzo(a)pyrene
(0.5'-3', 3'-8', and 8'-12')

Legend

- ○ Sample collected > 0.5' AND < OR = 3'
- □ Sample collected > 3' AND < OR = 8'
- △ Sample collected > 8' AND < OR = 12'
- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

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500 0 500 1000 Feet

Scale = 1 : 22,000

State Plane Coordinate Projection
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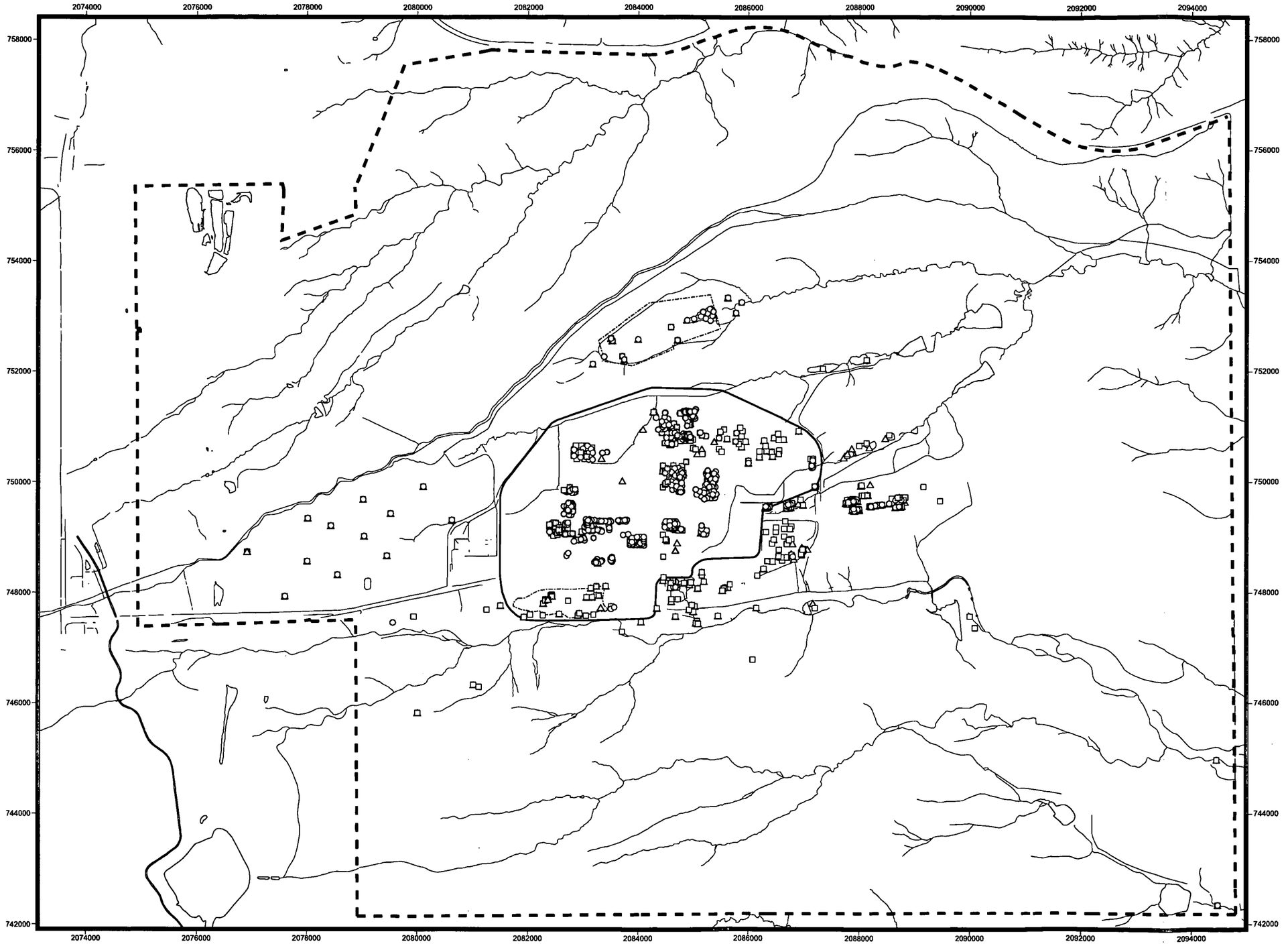

Figure 31

Subsurface Soil
Benzo(b)fluoranthene
(0.5'-3', 3'-8', and 8'-12')

Legend

- ○ Sample collected > 0.5' AND < OR = 3'
- □ Sample collected > 3' AND < OR = 8'
- △ Sample collected > 8' AND < OR = 12'
- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

N W E S

500 0 500 1000 Feet

Scale = 1 : 22,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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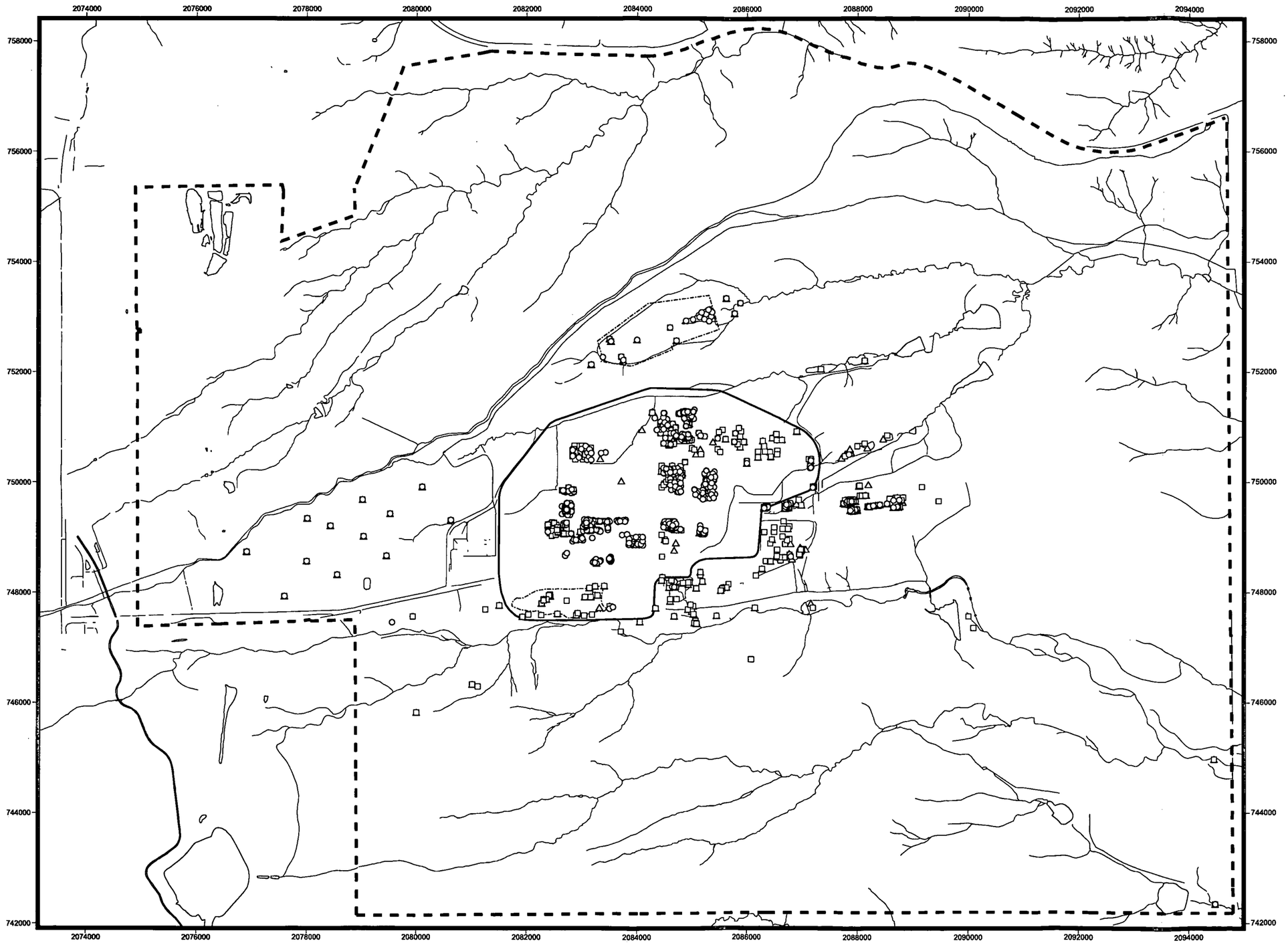

Figure 32

Subsurface Soil
Dibenz(a,h)anthracene
(0.5'-3', 3'-8', and 8'-12')

Legend

- ○ Sample collected > 0.5' AND < OR = 3'
- □ Sample collected > 3' AND < OR = 8'
- △ Sample collected > 8' AND < OR = 12'
- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT Data set: 04/27/05

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Scale = 1 : 22,000

State Plane Coordinate Projection
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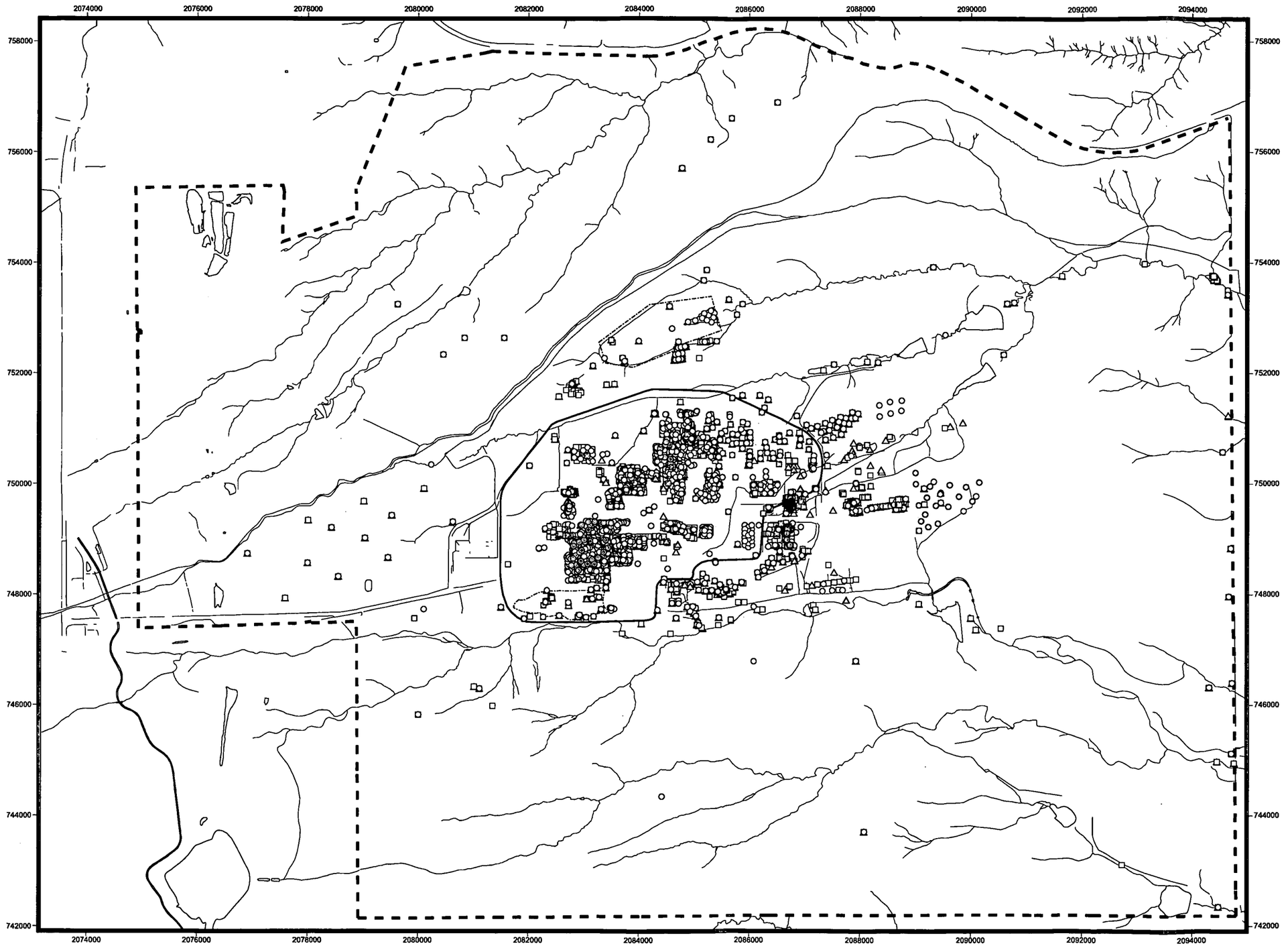

Figure 33

Subsurface Soil
Tetrachloroethene
(0.5'-3', 3'-8', and 8'-12')

Legend

- ○ Sample collected > 0.5' AND < OR = 3'
- □ Sample collected > 3' AND < OR = 8'
- △ Sample collected > 8' AND < OR = 12'
- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT Data set: 04/27/05

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Scale = 1 : 22,000
State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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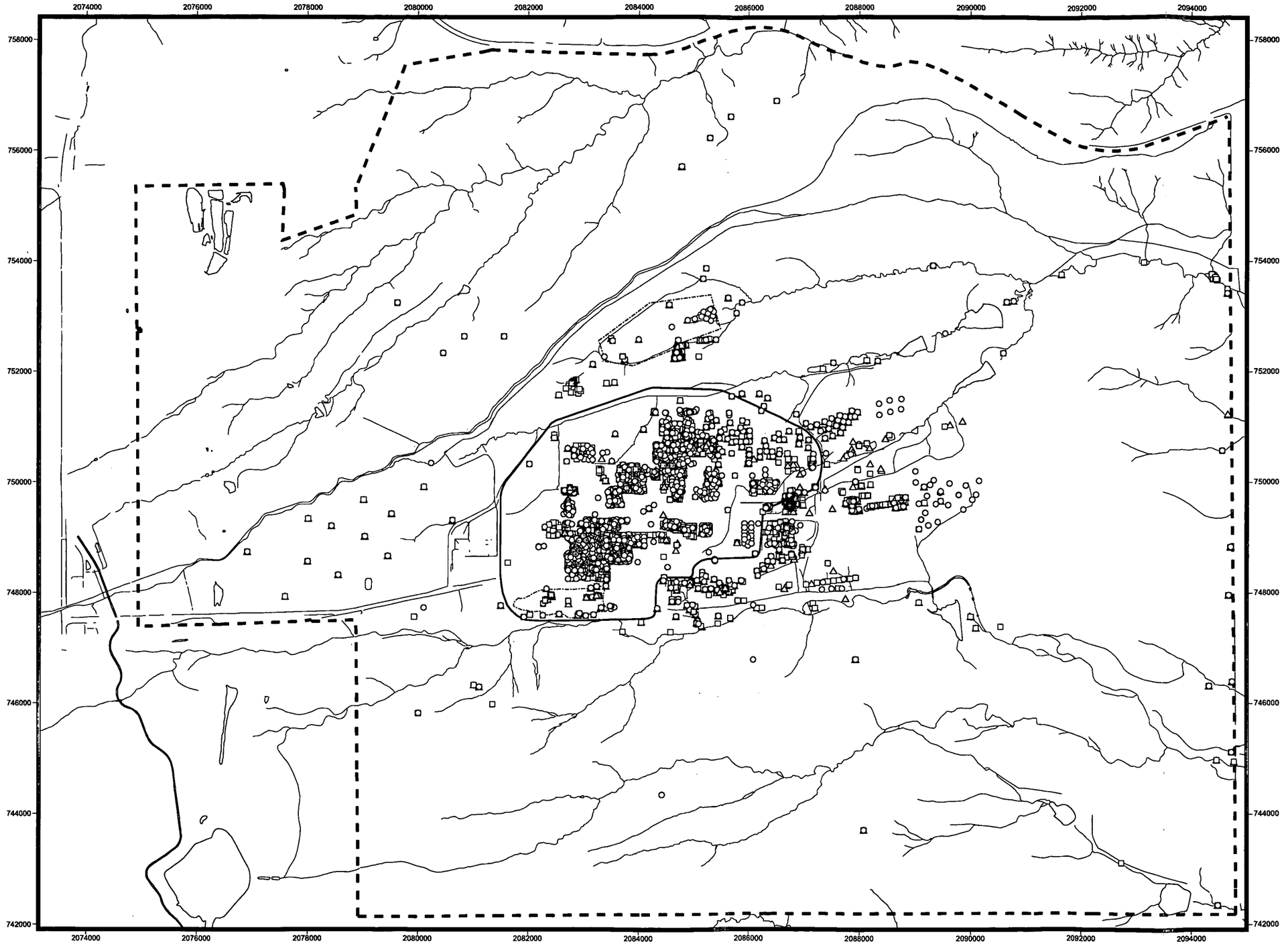

Figure 34

Subsurface Soil
Trichloroethene
(0.5'-3', 3'-8', and 8'-12')

Legend

- ○ Sample collected > 0.5' AND < OR = 3'
- □ Sample collected > 3' AND < OR = 8'
- △ Sample collected > 8' AND < OR = 12'
- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT Data set: 04/27/05

N W E S

500 0 500 1000 Feet

Scale = 1 : 22,000
State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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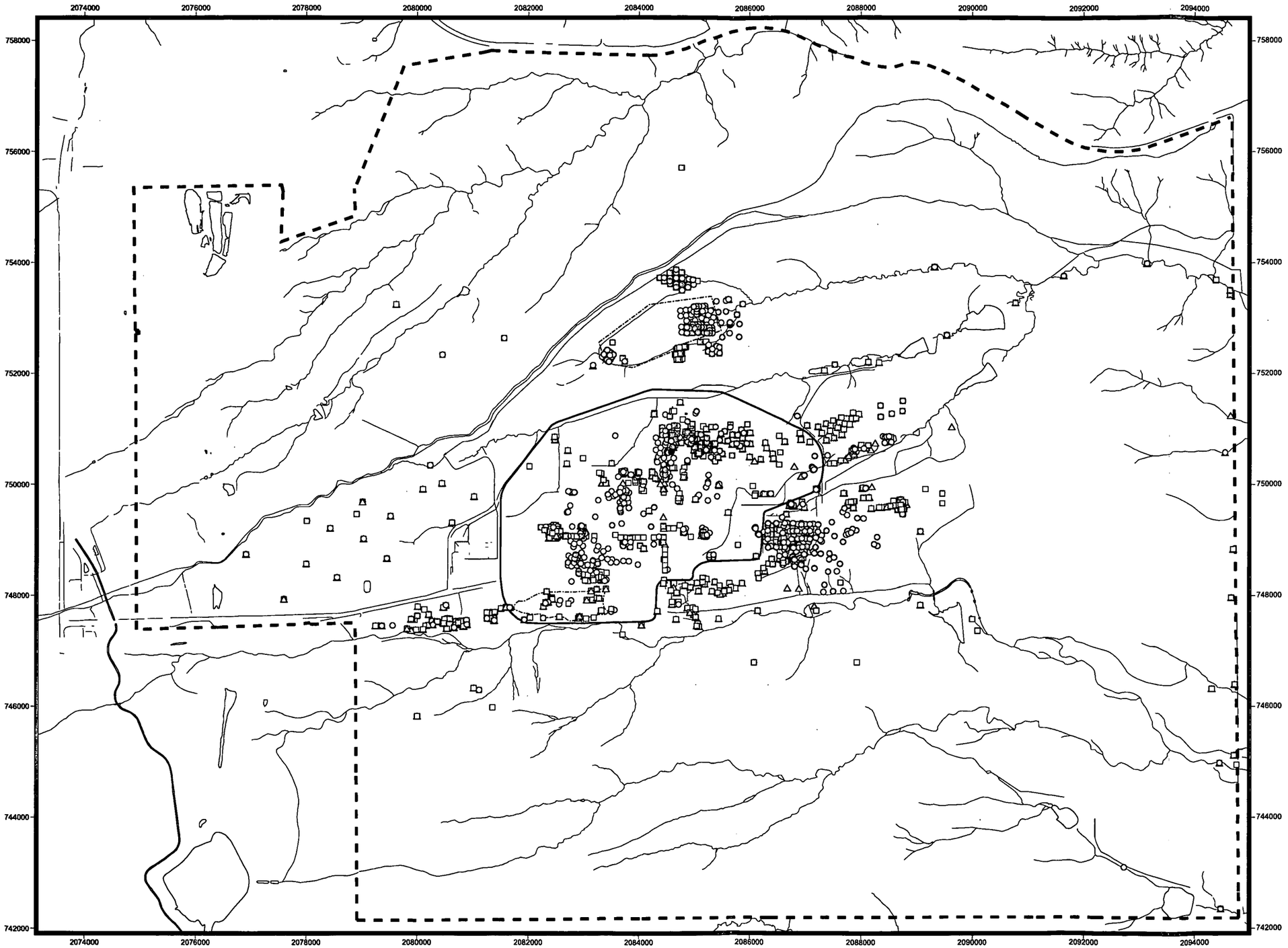

Figure 35

Subsurface Soil
Americium-241
(0.5'-3', 3'-8', and 8'-12')

Legend

- ○ Sample collected > 0.5' AND < OR = 3'
- □ Sample collected > 3' AND < OR = 8'
- △ Sample collected > 8' AND < OR = 12'
- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > Background AND < PRG
- ○ Constituent > Detection Limit AND < OR = Background
- ○ Constituent not detected

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

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Scale = 1 : 22,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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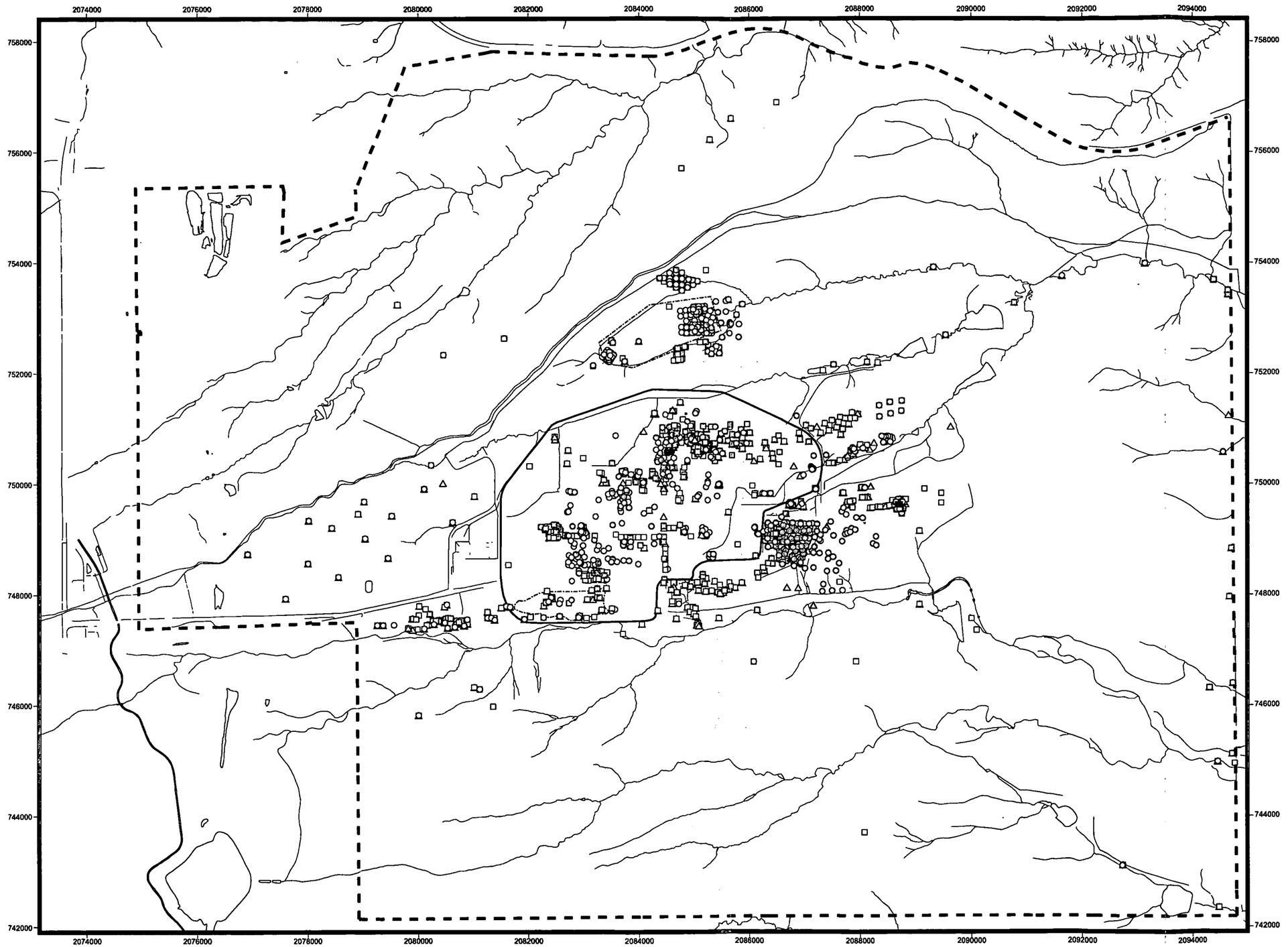

Figure 36

Subsurface Soil
Plutonium-239/240
(0.5'-3', 3'-8', and 8'-12')

Legend

- ○ Sample collected > 0.5' AND < OR = 3'
- □ Sample collected > 3' AND < OR = 8'
- △ Sample collected > 8' AND < OR = 12'
- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > Background AND < PRG
- ○ Constituent > Detection Limit AND < OR = Background
- ○ Constituent not detected

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

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500 0 500 1000 Feet

Scale = 1 : 22,000

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Datum: NAD 27

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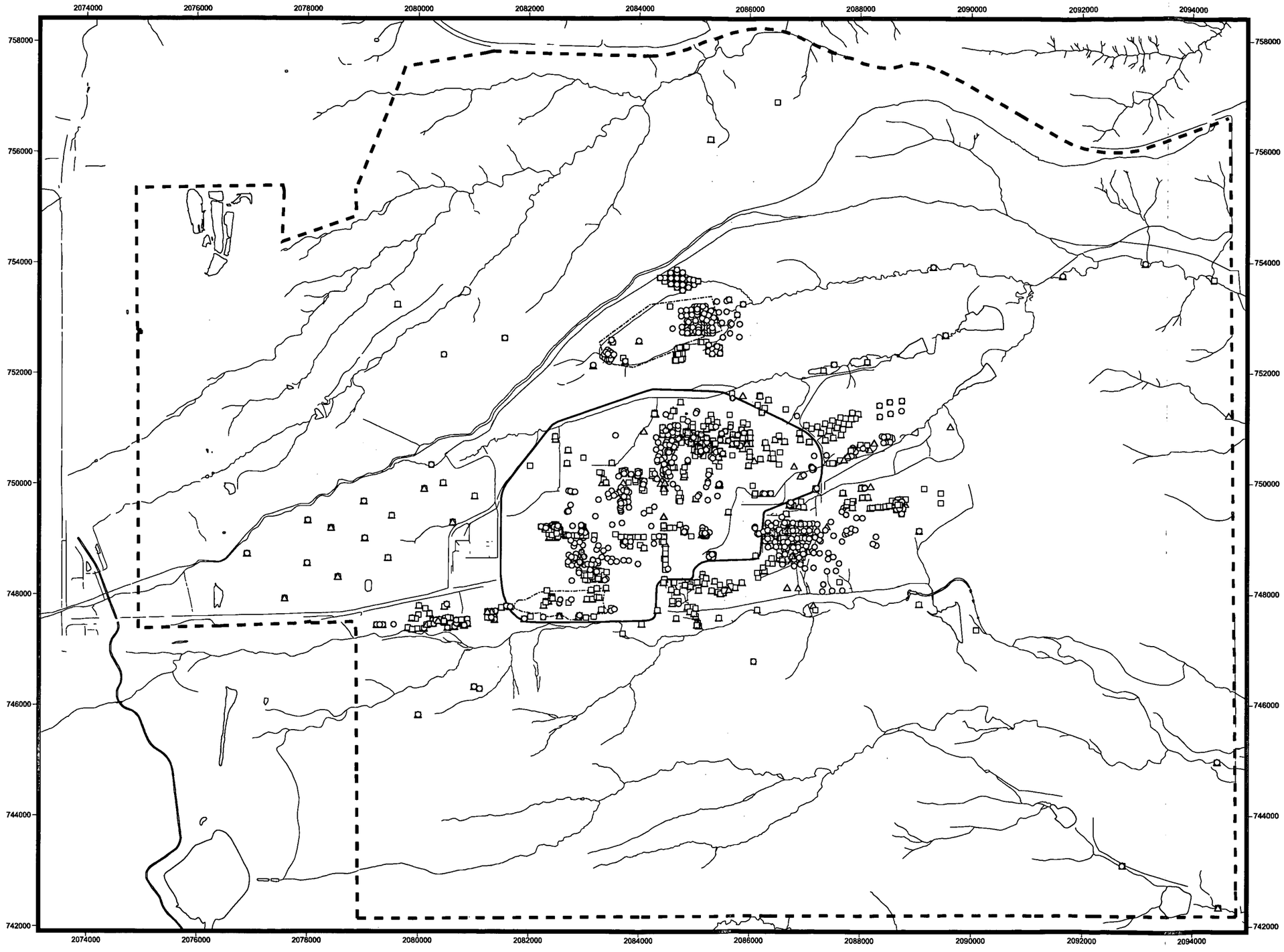

Figure 37
Subsurface Soil
Uranium
(U-233/234, U-235, and U-238)
(0.5'-3', 3'-8', and 8'-12')

Legend

- ○ Sample collected > 0.5' AND < OR = 3'
- □ Sample collected > 3' AND < OR = 8'
- △ Sample collected > 8' AND < OR = 12'
- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > Background AND < PRG
- ○ Constituent > Detection Limit AND < OR = Background
- ○ Constituent not detected

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 4/30/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/07/05

N
W E
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500 0 500 1000 Feet

Scale = 1 : 22,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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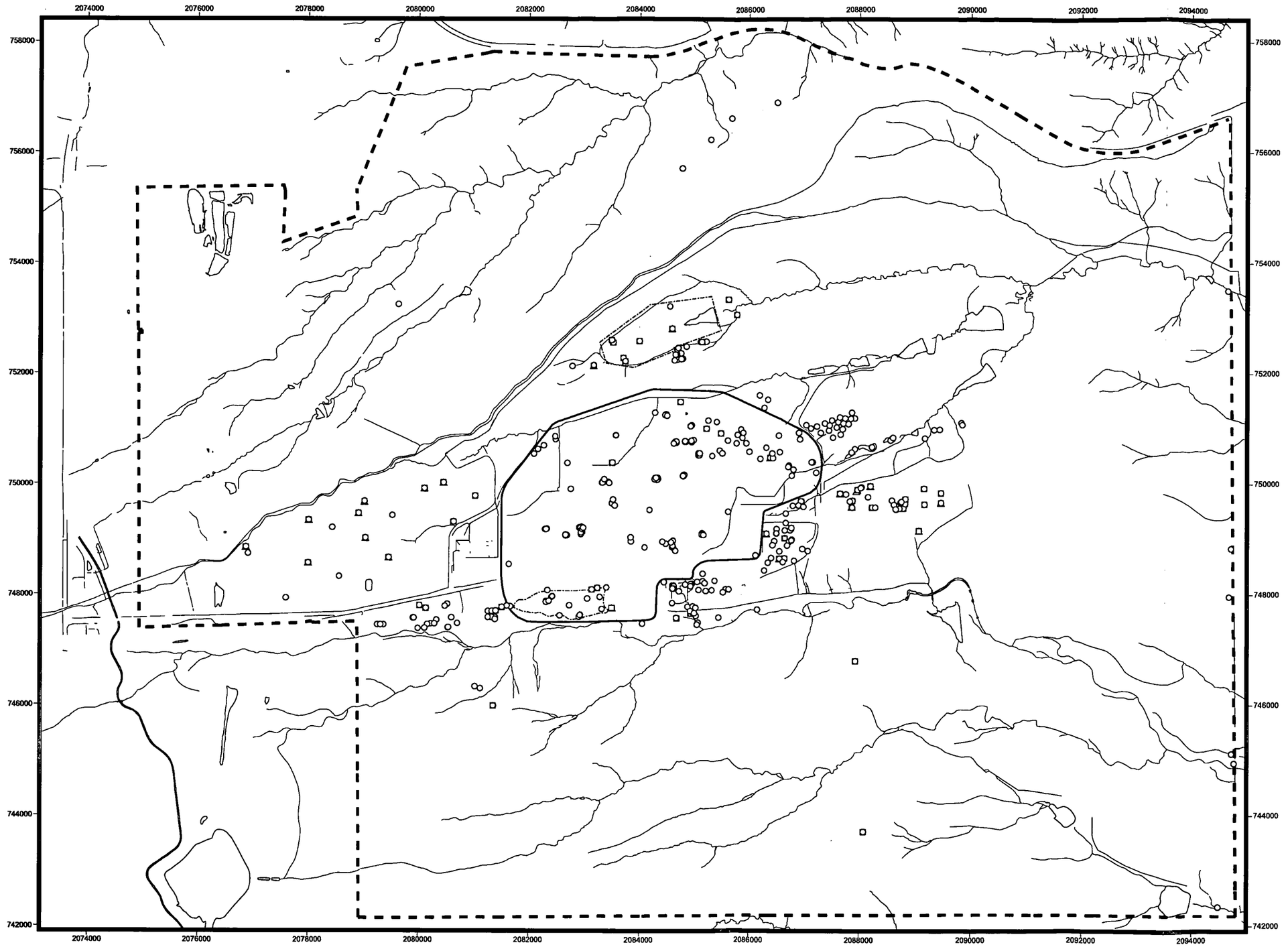

Figure 38

Subsurface Soil
Chromium, total
(12'-30', 30'-50', and >50')

Legend

- ○ Sample collected > 12' AND < OR = 30'
- □ Sample collected > 30' AND < OR = 50'
- △ Sample collected > 50'
- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > Background AND < PRG
- ○ Constituent > Detection Limit AND < OR = Background
- ○ Constituent not detected

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

N
W E
S

500 0 500 1000 Feet

Scale = 1 : 22,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by:

Date: June 30, 2005

Prepared for:

KAISER•HILL COMPANY

File: W:\Projects\FY2005\RI-FS\Nature_&_Extent\Round3\Subsurfacesoil_Figs.apr

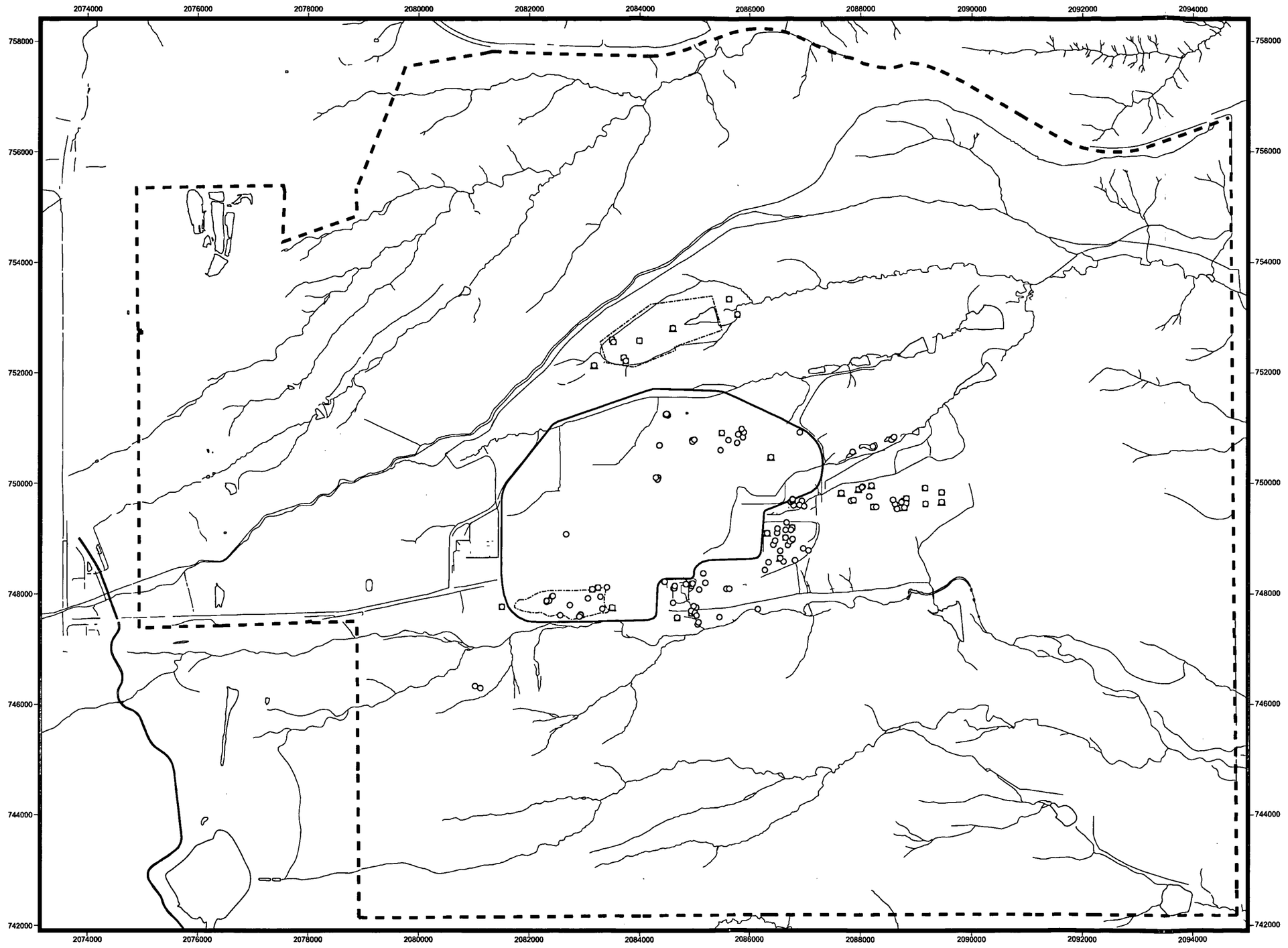

Figure 39

Subsurface Soil
PCBs (Aroclor 1260)
(12'-30', 30'-50', and >50')

Legend

- ○ Sample collected > 12' AND < OR = 30'
- □ Sample collected > 30' AND < OR = 50'
- △ Sample collected > 50'
- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

N W E S

500 0 500 1000 Feet

Scale = 1 : 22,000

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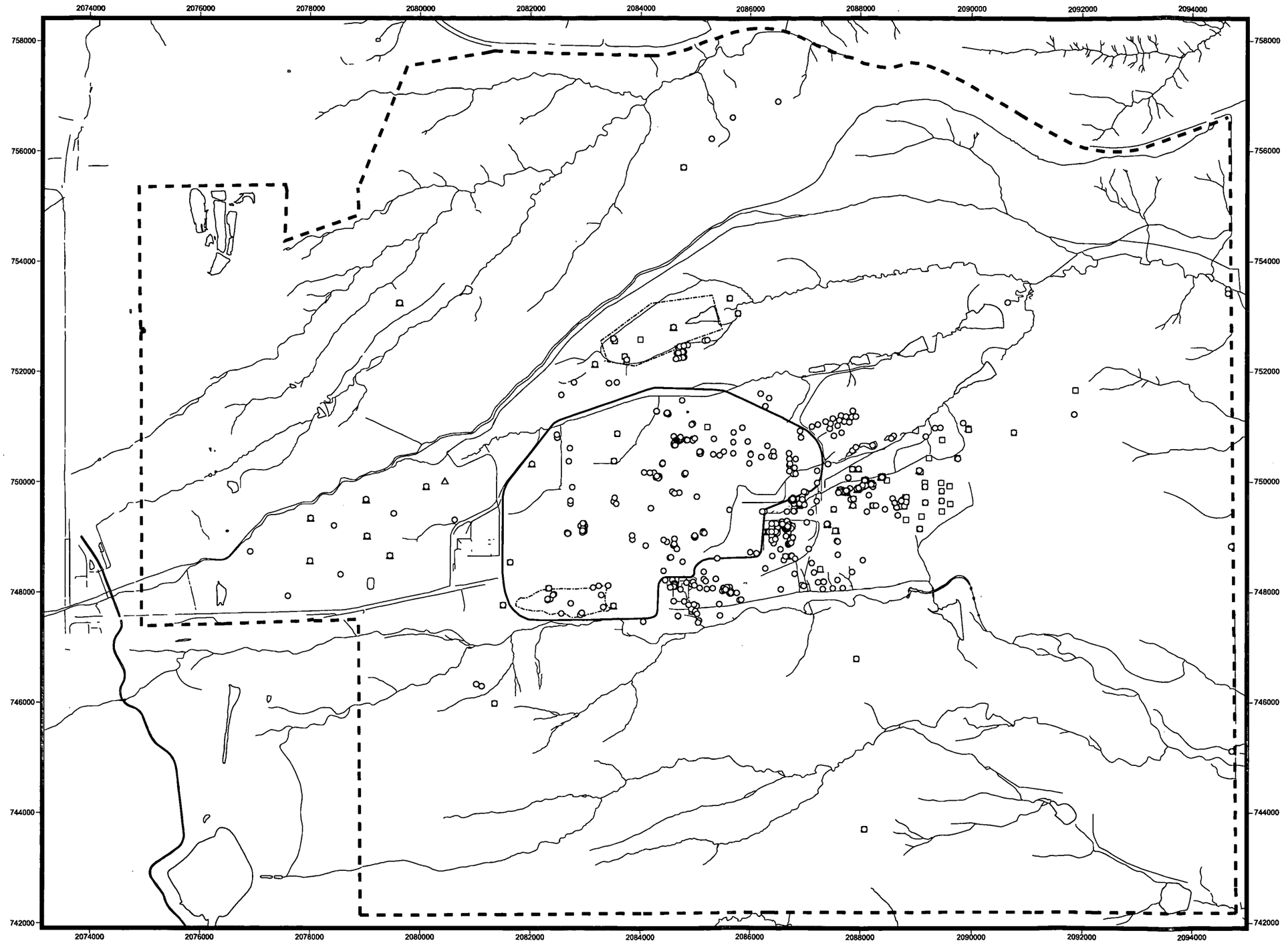

Figure 40

Subsurface Soil
1,1,2,2-Tetrachloroethane
(12'-30', 30'-50', and >50')

Legend

- ○ Sample collected > 12' AND < OR = 30'
- □ Sample collected > 30' AND < OR = 50'
- △ Sample collected > 50'
- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

N W E S

500 0 500 1000 Feet

Scale = 1 : 22,000

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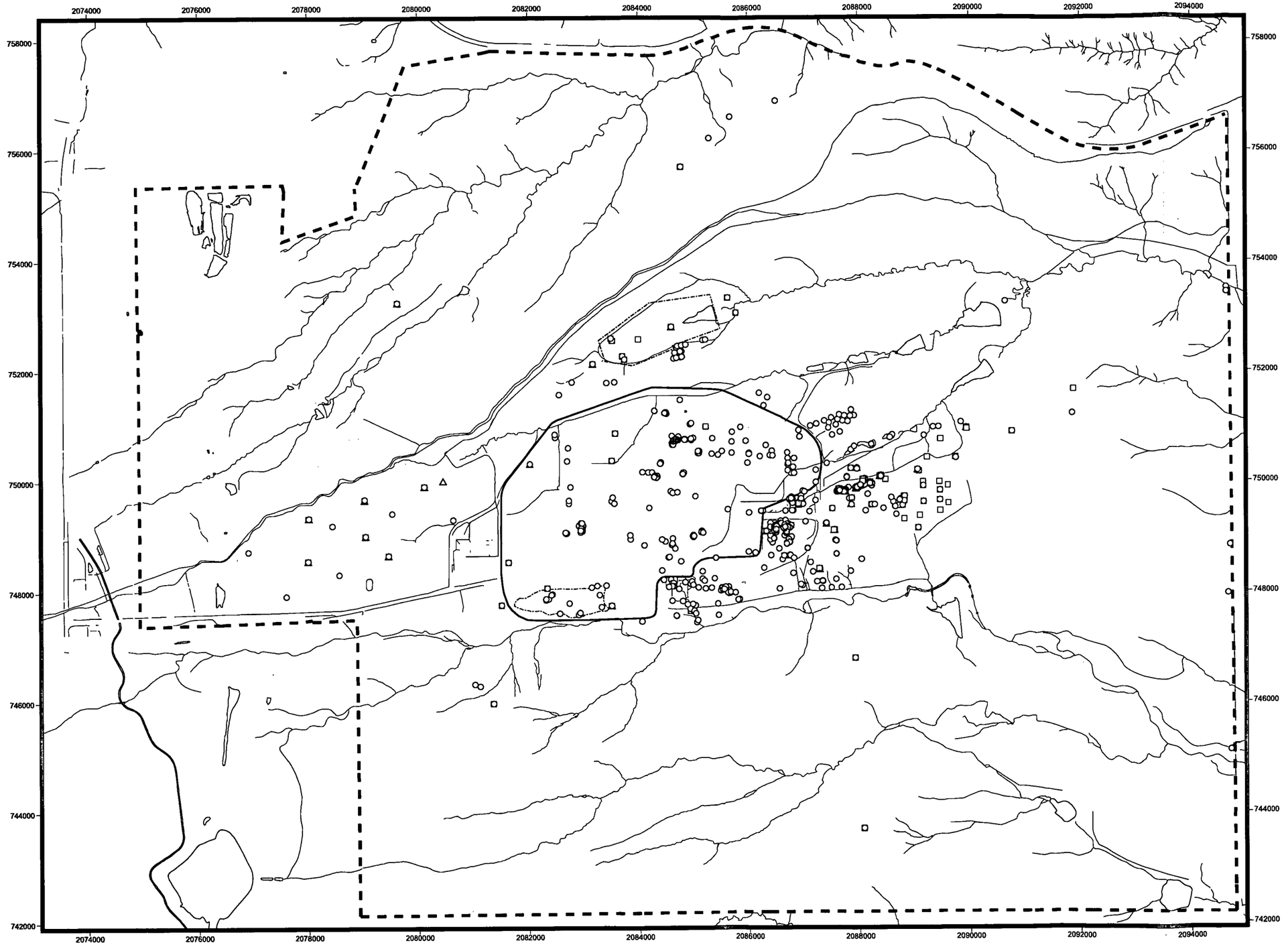

Figure 41

Subsurface Soil
Carbon Tetrachloride
(12'-30', 30'-50', and >50')

Legend

- ○ Sample collected > 12' AND < OR = 30'
- □ Sample collected > 30' AND < OR = 50'
- △ Sample collected > 50'
- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT Data set: 04/27/05

N W E S

500 0 500 1000 Feet

Scale = 1 : 22,000

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Prepared by: Date: June 30, 2005

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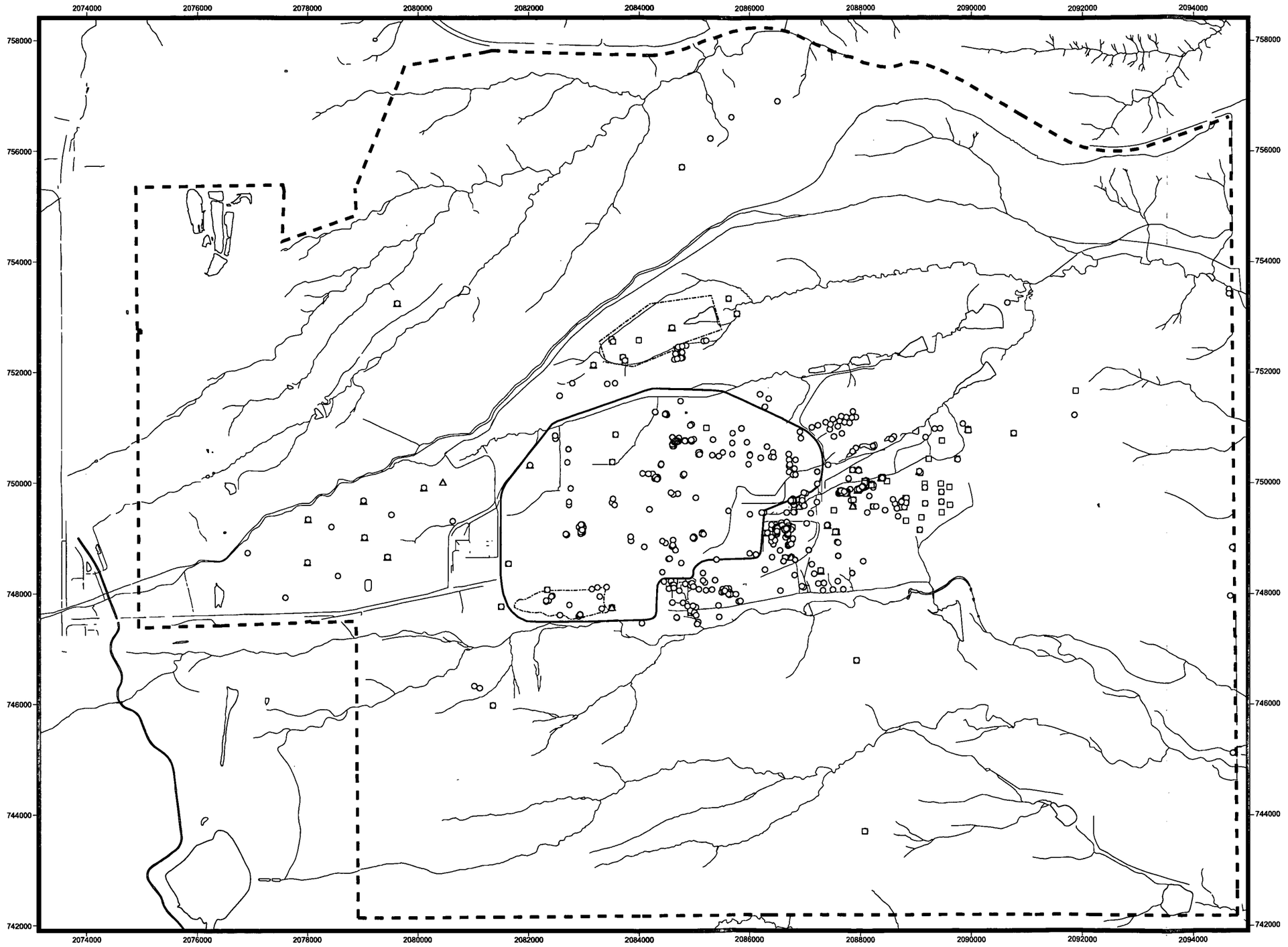

Figure 42

Subsurface Soil
Chloroform
(12'-30', 30'-50', and >50')

Legend

- ○ Sample collected > 12' AND < OR = 30'
- □ Sample collected > 30' AND < OR = 50'
- △ Sample collected > 50'
- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
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- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

N W E S

500 0 500 1000 Feet

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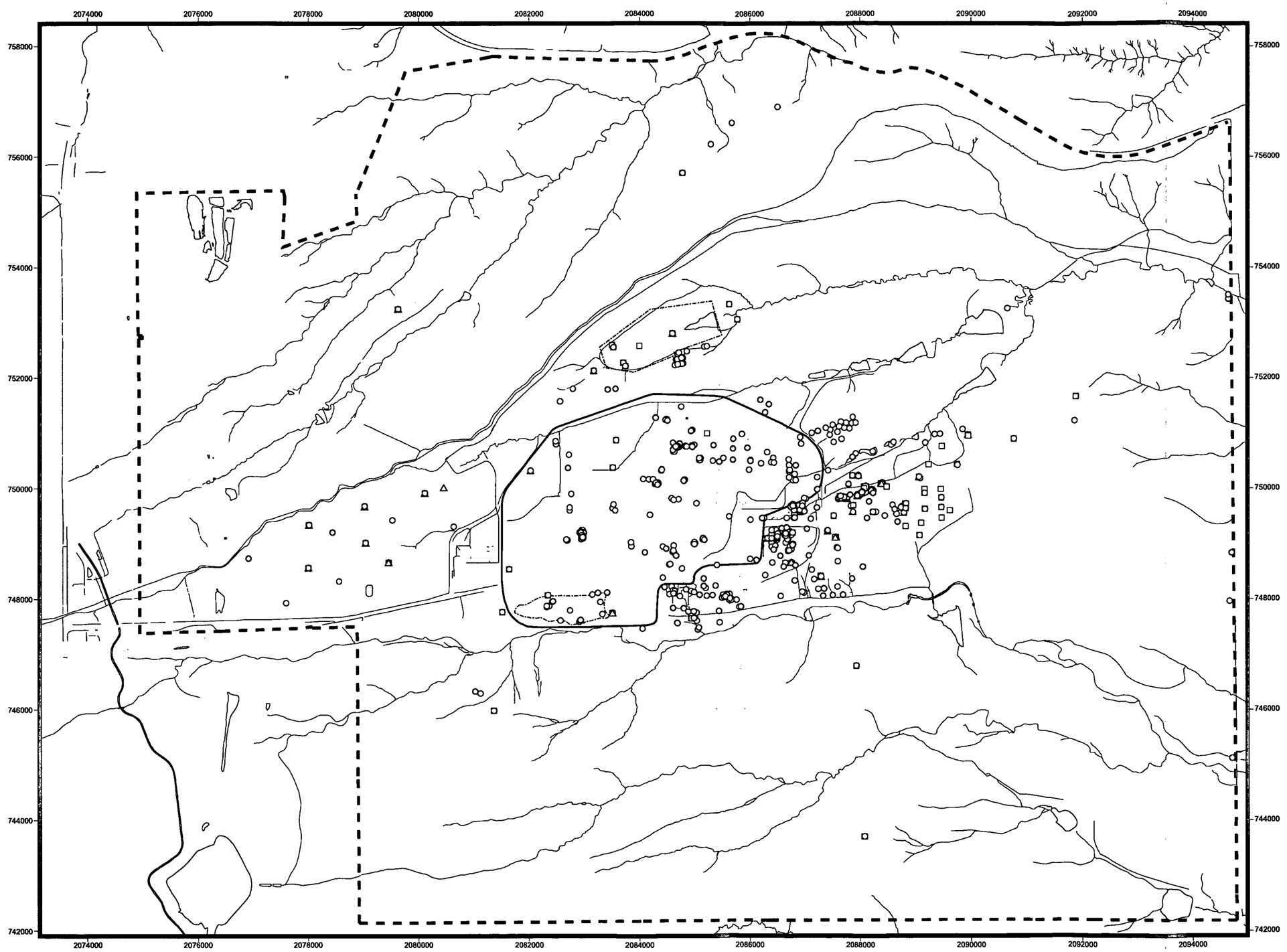

Figure 43

Subsurface Soil
Methylene Chloride
(12'-30', 30'-50', and >50')

Legend

- ○ Sample collected > 12' AND < OR = 30'
- □ Sample collected > 30' AND < OR = 50'
- △ Sample collected > 50'
- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 4/27/2005.

Standard Map Features

- Industrial Area
- Pond
- Stream
- Original Landfill
- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

N W E S

500 0 500 1000 Feet

Scale = 1 : 22,000

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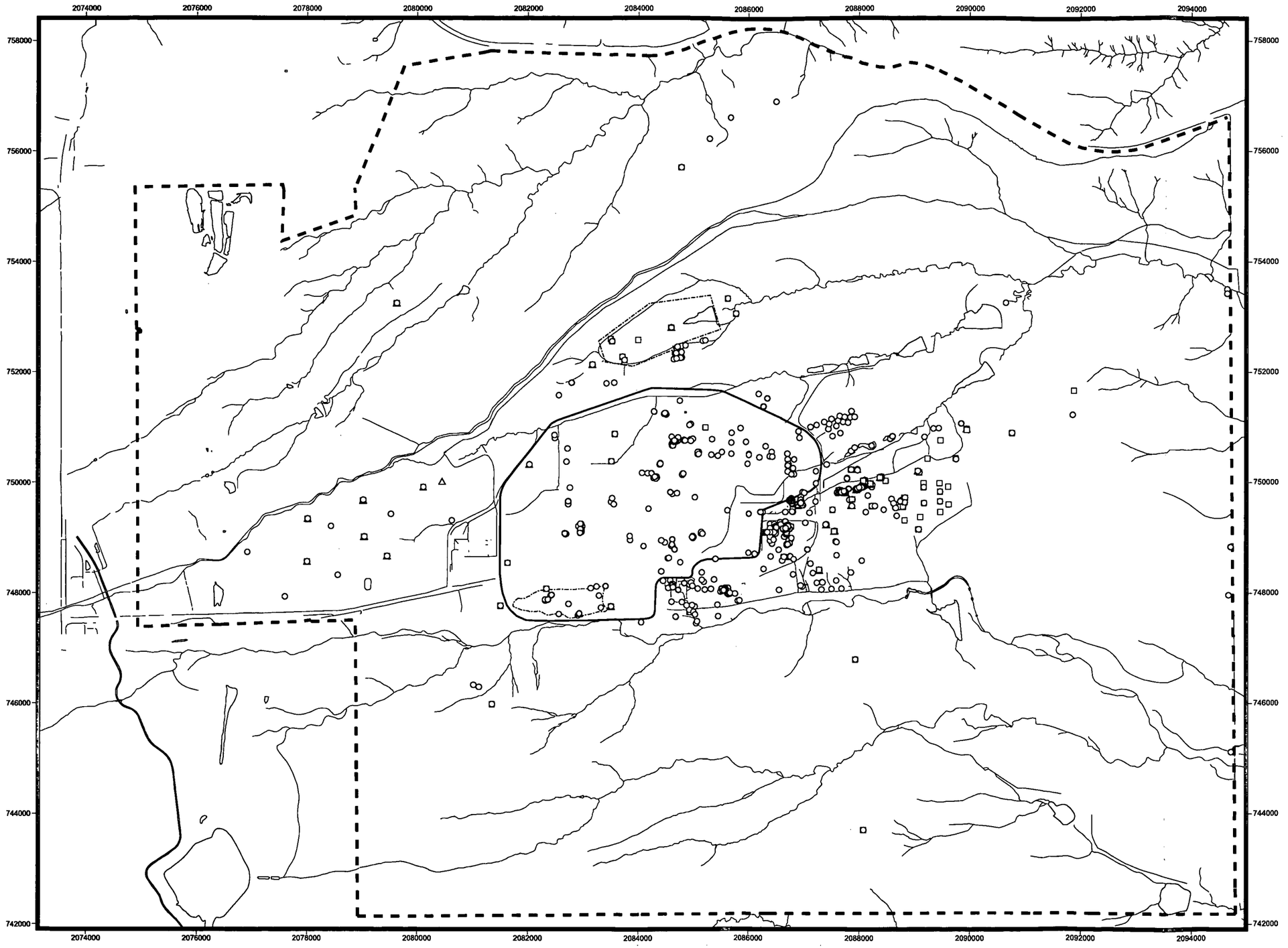

Figure 44

Subsurface Soil
Tetrachloroethene
(12'-30', 30'-50', and >50')

Legend

- ○ Sample collected > 12' AND < OR = 30'
- □ Sample collected > 30' AND < OR = 50'
- △ Sample collected > 50'
- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
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Standard Map Features

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- Pond
- Stream
- Original Landfill
- Present Landfill
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DRAFT

Data set: 04/27/05

N W E S

500 0 500 1000 Feet

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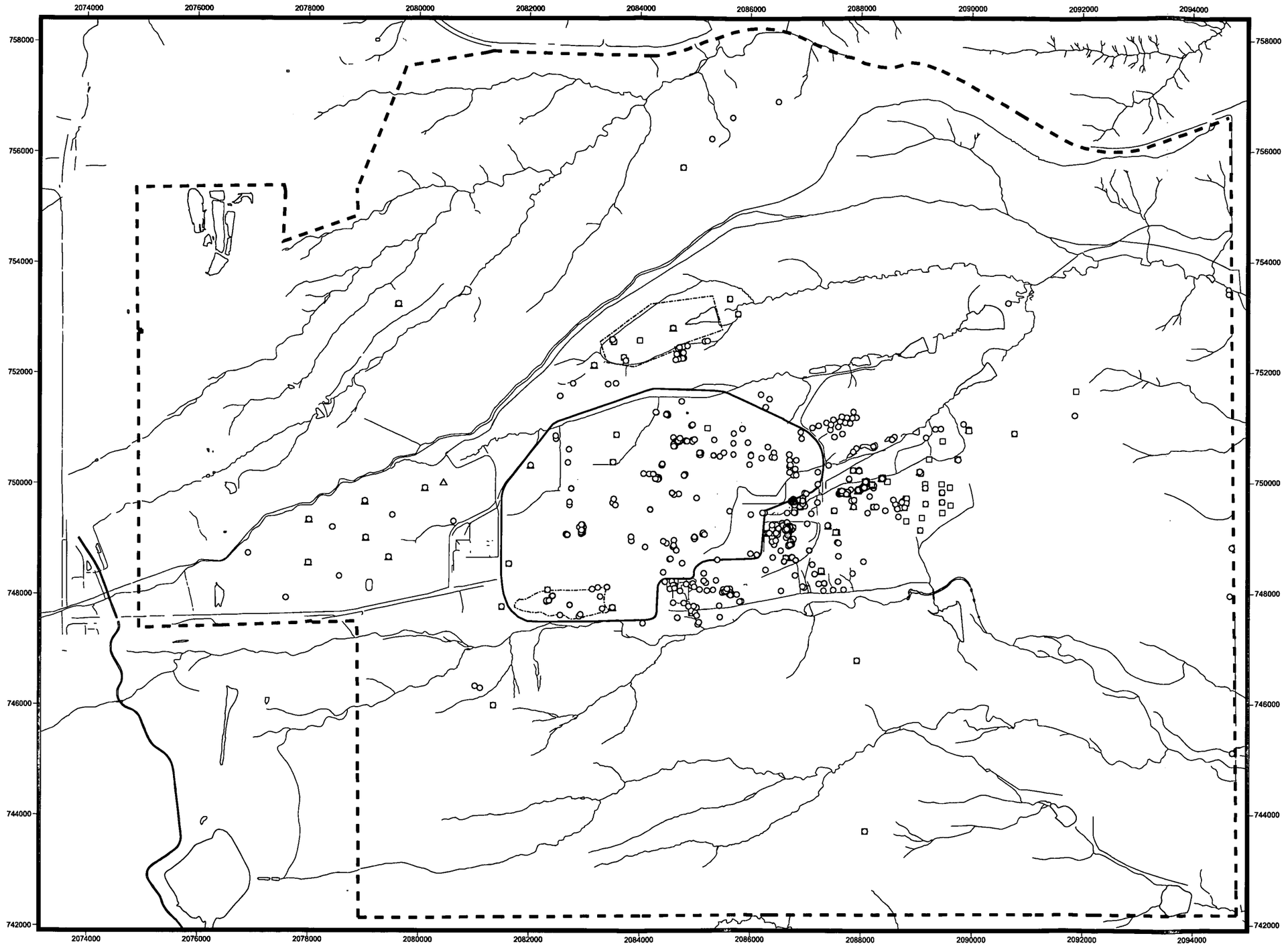

Figure 45

Subsurface Soil
Trichloroethene
(12'-30', 30'-50', and >50')

Legend

- ○ Sample collected > 12' AND < OR = 30'
- □ Sample collected > 30' AND < OR = 50'
- △ Sample collected > 50'
- ● Constituent > OR = 10 x PRG
- ○ Constituent > OR = PRG AND < 10 x PRG
- ○ Constituent > OR = Detection Limit AND < PRG
- ○ Constituent not detected

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 4/27/2005.

Standard Map Features

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- Present Landfill
- Site boundary

DRAFT

Data set: 04/27/05

N W E S

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